AS PER THE NCISM SYLLABUS

Paper 1 (Chapter 1 to 10)

VOL. 1

FUNDAMENTALS OF DRAVYAGUNA

Dr. Mahesh T.S.

Dr. Subrahmanya Padyana
Dr. Soumyashree K.M.

Dr. Farhan Zameer
Dr. Anjali Kumari M.U.

CHAUKHAMBHA ORIENTALIA

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Syllabus

Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non-Lecture hours
1	**Dravyaguna Vigyana**	1	1	1	1
2	**Dravya** 2.1 Panchabhoutikatwa of Dravya 2.2 Classification of Dravya based on Utpattibheda, Yonibheda, Prayogabheda, Prabhavbheda, Doshaghnabheda, Rasabheda and Karmbheda	1	6	5	4
3	**Guna** 3.1 Panchabhoutikatva, characteristics and classification 3.2 Gurvadiguna and its karma on Dosha, Dhatu and Mala, clinical application and research updates 3.3 Paradiguna with examples, clinical applications and research updates	1	11	4	2
4	**Rasa** 4.1 Meaning of "Rasa" in various contexts 4.2 Shadrasa in relative correlation with taste of chemical constituents 4.3 Rasotpatti and Panchabhoutika constitution of Shadrasa 4.4 Rasopalabdhi and pathway of taste perception & sites of taste receptors in the body 4.5 Rasa - Lakshana, Guna & Karmas of each Rasa on Dosha, Dhatu and Mala 4.6 Atiyogalakshana, 4.7 Clinical application and Research updates of Shadrasa 4.8 Anurasa 4.9 Rasa Sevanakrama of Aushadha	1	11	7	4
5	**Vipaka** 5.1 Trividha Vipaka 5.2 Vipak karma on Dosha, Dhatu and Mala 5.3 Clinical application and Research updates 5.4 Vipakopalabdhi (Determination of Vipaka) & Taratamya (Degree of variation)	1	6	3	1

Sr. No	A2 List of Topics	B2 Term	C2 Marks	D2 Lecture hours	E2 Non-Lecture hours
6	**Virya** 6.1 Difference between Guna and Virya 6.2 Karmas of Virya on Dosha, Dhatu and Mala 6.3 Clinical application and Research updates 6.4 Viryaopalabdhi (Determination of Virya) and understanding of Virya with respect to actions of active constituents	1	6	2	2
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9	**Karma** • **Individual Karma, correlation with contemporary pharmacological action, examples, clinical application and research updates** 9.1 Deepana; 9.11 Grahi 9.2 Pachana; 9.12 Sthambhana 9.3 Samshodhana; 9.13 Madakari 9.4 Samshamana; 9.14 Pramathi 9.5 Anulomana; 9.15 Abhishyandi 9.6 Sransana; 9.16 Vyavayi 9.7 Bhedana; 9.17 Vikashi 9.8 Rechana; 9.18 Rasayana 9.9 Chhedana; 9.19 Vajeekarana 9.10 Lekhana; 9.20 Medhya	1	11	9	5
10	**Karmas of Dashemani Gana**	1	5	12	3

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Chapter No.: 1

Dravyaguna Vijnana

Dr. Sowmyashree. K. M

Objectives of the Chapter

1. **Define Dravyaguna Vijnana**
2. **Explain the role of Dravyaguna Vijnana in clinical practice**

Topics in the Chapter

Dravyguna Vijnana

Introduction

The word 'Dravyaguna Vijnana' means the science dealing with Guna (properties) and Karma (actions) of the Dravya (drugs/substances). This is the counterpart of modern pharmacology belonging to Ayurveda. It would be necessary, at first to understand the fundamentals of Ayurveda to have a thorough knowledge of Dravyaguna. Charaka Samhita, the first treatise of Ayurvedic literature, starts with Bheshajachatushkala [first to fourth chapter of Sutrasthana] showing deep attention towards importance of Dravyaguna. While the last quadret is Annapana Chatushka (Chapter 25-28) exhibiting the importance of food substances (Ahara) as well. Dravyas (substances) are used as both Ahara and Aushadha. Aushadhi Dravyas are Veerya Pradhana and Ahara Dravyas are Rasa Pradhana. Ahara chatushka is useful to maintain the health of healthy person while the Bheshajachatushka is useful to treat the diseased. Dravyagunashastra deals primarily with the Dravya (substance) which is one of the basic components of the treatment. It provides the detailed knowledge about the Dravyas (substance) such as identification, properties, actions, uses and dosage of drugs. These information or knowledge when applied on the Chikitsa Tatwa (Treatment principles), helps in the fulfillment of the objective of Ayurveda namely maintenance of health and cure of disease.

It is to be observed that the Dravyaguna Shastra is a part of every branch of Ayurveda (8 Branches) as substance is the part of treatment but probably

owing to its increase in the number of substances, its separate study and literature became essential. Hence, Pandit Narahari, the author of Raja Nighantu mentioned as a separate branch in his book Raja Nighantu that was written in of 14th century A.D.

1.1 Definition of Dravyaguna

The word Dravyaguna has two words – Dravya (drugs/substances) and Guna (properties). The two words stand for the important factors that are inter-related and form the basis of every activity that the substance exhibits when used for a specific purpose.

यतश्चायुष्याणि अनायुष्याणि च द्रव्यगुणकर्माणि वेदयत्यतोऽप्यायुर्वेदः । (C.S.Su 30/23)

The word 'Dravyaguna' is mentioned by Charaka, who defined Ayurveda as the science which deals about Ayu (life) through the Dravya-Gunas and Karmas of Ayushyani (harmless) and Anayushyani (harmful) substances.

According to Chakrapanidatta,

गुणशब्देन चेह धर्मवाचिना रसवीर्यविपाकप्रभावाः सर्व एव गृह्यन्ते । (C.S.Su 1/59-61, Chakrapani)

The word 'गुण' of the Dravya refers to Rasa (taste), Veerya (potency), Vipaka (end product) and Prabhava (special action). So, in short, the word Dravyaguna emphasises the properties, actions and therapeutic uses of the Dravya (either Ahara or Aushadha).

द्रव्याणां गुणकर्माणि प्रयोगा विविधास्तथा । सर्वशो यत्र वर्ण्यन्ते शास्त्रं द्रव्यगुणं हि तत् ॥ (P.V Sharma)

As per Acharya Priyavrata Sharma's definition, Dravyaguna is the Shastra (science) which deals with the Guna (properties), Karma (actions) and Prayoga (therapeutic utility) of the Dravya.

1.2 The Role of Dravyaguna Vijnana In Clinical Practice

Substances whether food or medicine are those that interact with the body and bring about the desired or undesired changes in the body. The part of Ayurveda that deals with the details of substances especially medicine is Dravyaguna Shastra. It is an important part of Ayurveda therapeutics, as it gives a detailed information about the properties, actions and therapeutic utility of all the dravyas, mainly the medicinal substances. It is the base for the proper understanding of how the substance interacts with the body and what are its effects on the body so as to achieve the objectives of Ayurveda.

स्वस्थस्य स्वास्थ्य रक्षणं, आतुरस्य विकार प्रशमनं च । (C.S.Su 30/26)

Ayurveda emphasises on two principles for the attainment of the health –

i) **स्वस्थस्य स्वास्थ्य रक्षणं – Maintaining the health of the healthy person.**

ii) **आतुरस्य विकार प्रशमनं – Treating the diseased one.**

Dravyagunashastra is not only a useful factor for the maintenance of health and treatment, but it also a major tool for the right selection of Dravya (medicine) in treatment. Thorough insight into the properties and actions of Dravyas is necessary for the treatment as well as maintenance of health.

गुणा य उक्ता द्रव्येपु शरीरेष्वपि ते तथा । स्थानवृद्धिक्षयास्तस्माद् देहिनो द्रव्यहेतुकाः ॥(Su.S.Su 41/12)

Various substances are instrumental in vitiating the Doshas and cause disharmony in the body. The judicious application of Dravyaguna principles helps in restoring the equilibrium of the vitiated doshas.

हेतु लिङ्गौपधज्ञानं स्वस्थातुरपरायणम् । (C.S.Su 1/24)

Acharya Charaka mentioned it as one among the Triskandas (3 pillars) of Ayurveda. Thorough knowledge of Aushadha (dravya) is important in maintaining the health. Knowledge of Dravya can be attained by the help of Dravyaguna Shastra.

भिषक् द्रव्याण्युपस्थाता रोगी पादचतुष्टयम् । (C.S.Su 9/3)

Dravya is one among the Chikitsa Chatushpada, where it is placed second place. For the successful treatment, all the four limbs namely Bhishak (doctor), Dravya (medicine), Upasthata (nurse/attender), Rogi (patient) should be well co-ordinated.

योगादपि विषं तीक्ष्णमुत्तमं भेषजं भवेत् । भेषजं चापि दुर्युक्तं तीक्ष्णं सम्पद्यते विषम् ॥ (C.S.Su 1/126)

If a medicine is used judiciously, even a Vishadravya (poison) may acts as Bheshaja (medicine), where as Bheshaja (medicine) if not used properly may become Visha (poison). Hence logical application of Dravya is very much important in treatment. So, a detailed knowledge of Dravya and its properties plays a crucial role in every stage of treatment.

तदेव युक्तं भैषज्यं यदारोग्याय कल्पते । स चैव भिषजां श्रेष्ठो रोगेभ्यो यः प्रमोचयेत् ॥ (C.S.Su 1/134)

Shreshta Vaidya is one who is able to judge the state and stage of the roga (disease) and rogi (diseased) and also should be able to choose the right medicine according the status.

औषधं ह्यनभिज्ञातं नामरूपगुणैस्त्रिभिः । विज्ञातं चापि दुर्युक्तमनर्थायोपपद्यते ॥ (C.S.Su 1/125)

Though the Aushadha is being well versed by name, form and its properties, it is going to give adverse effects if it is not administered properly. So judicious

understanding of Shastraartha is necessary in validating the basic concepts of Dravyaguna.

यथा विषं यथा शस्त्रं यथाऽग्निरशनिर्यथा । तथौषधमविज्ञातं विज्ञातममृतं यथा ॥ (Ca.Sa.Su 1/124)

Administration of an unknown drugs does at times acts like a visha (poison), Shastra (weapon), Agni (fire) an Ashani (thunderbolt), whereas a known drug acts as Amruta (nectar).

मात्राकालाश्रया युक्तिः सिद्धिर्युक्तौ प्रतिष्ठिता । तिष्ठत्युपरि युक्तिज्ञो द्रव्यज्ञानवतां सदा ॥ (Ca.Sa.Su 2/16)

Matra (dosage), Kala (season) should be considered while planning the treatment. Hence one who knows the proper application of Dravyas stands superior.

Panchapadarthas (Five constituents) of Dravyaguna

As per Bhavamishra (Author of Raja Nighantu), there are five constituents reside in a Dravya.

द्रव्ये रसो गुणो वीर्यं विपाकः शक्तिरेव च । पदार्था पञ्च तिष्ठन्ति स्वं स्वं कुर्वन्ति कर्म च ॥ (B.P.Pra 6/169)

Rasa, Guna, Veerya, Vipaka and Prabhava are the Panchapadarthas reside in a Dravya and performs their Karma respectively.

Saptapadarthas (Seven constituents) of Dravyaguna

Professor Yadavji Trikamji Acharya adds Dravya and Karma to the Panchapadarthas and thus refers as Saptapadarthas. Dravyaguna Shastra mainly deals with these seven aspects as the fundamental principles. The Sapta padarthas are -Dravya, Rasa, Guna, Veerya, Vipaka, Prabhava and Karma.

Dravya (Substance):

यत्राश्रिताः कर्मगुणाः कारणं समवायि यत् । तद्द्रव्यं.. ॥ (C.S.Su 1/51)

Dravya is a substance in which Karma (actions) and Guna (properties) are resided. The Dravya is in Samavaya (inherent) relation with Karma and Guna.

Guna (Property/Quality):

समवायी तु निश्चेष्टः कारणं गुणः । (C.S.Su 1/51)

It is the property which will have inherent relation with the Dravya but remain inactive. That means it cannot perform any action without the help of other ingredients.

सार्था गुर्वादयो बुद्धिः प्रयत्नान्ताः परादयः । गुणाः प्रोक्ताः .... ॥ (C.S.Su 1/49)

There are 41 gunas according to Acharya Charaka.

1. Artha guna – 5
2. Gurvadi guna – 5
3. Buddhi prayatnanta – 6
4. Paradi guna – 10

Rasa (Taste):

रसनार्थो रसस्तस्य द्रव्यमापः क्षितिस्तथा । निर्वृत्तौ च विशेषे च प्रत्ययाः खादयस्त्रयः ॥ (C.S.Su 1/64)

The property which is perceived through the Rasanendriya (Gustatory organ) is known as Rasa. Ap and Prithvi are the Mahabhuta's responsible in the manifestation of Rasa. Other Mahabhuta's (Teja, Vayu and Akasha) are the causative factors.

स्वादुरम्लोऽथ लवणः कटुकस्तिक्त एव च । कषायश्चेति षट्कोऽयं रसानां संग्रहः स्मृतः ॥ (C.S.Su 1/65)

Swadu (Sweet), Amla (Sour), Lavana (Salt), Katu (Pungent), Tikta (Bitter) and Kashaya (Astringent) are the six Rasas.

Vipaka (Drug metablosim):

जाठरेणाग्निना योगाद्यदुदेति रसान्तरम् । रसानां परिणामान्ते स विपाक इति स्मृतः ॥ (A.H.Su 9/20)

The Vipaka is that which occurs as a transformation of Rasa (at the end of metabolism) after the completion of digestion of Ahara in association with Jataragni.

अवस्थापाकापेक्षयाविशिष्टः पाकः विपाकः । (Shivadas)

It is the special mechanism happens after the digestion of ingested food, which is responsible for the final form of the drug inside the body.

त्रिधा विपाको द्रव्यस्य स्वाद्वम्लकटुकात्मकः । (A.H.Su 1/17)

There are 3 types of Vipaka mentioned in Ayurveda – Madhura, Amla and Katu

Veerya (Potency):

......वीर्यं तु क्रियते येन या क्रिया । नावीर्यं कुरुते किञ्चित् सर्वा वीर्य कृता क्रियाः ॥ (C.S.Su 26/65)

It is the property by which the dravya brings the therapeutic effect. It is also mentioned that every action of a drug is under the control of Veerya.

उष्णशीतगुणोत्कर्षात् तत्र वीर्यं द्विधा स्मृतम् । (A.H.Su 1/17)

Ushna (hot) and Sheeta (cold) are the two types of veeryas.

Prabhava (Non-specific activity):

रसवीर्यविपाकानां सामान्यं यत्र लक्ष्यते । विशेषः कर्मणां चैव प्रभावस्तस्य स स्मृतः ॥ (C.S.Su 26/67)

When a drug produces a result which is not in accordance with the constituents viz; Rasa, Guna, Virya, Vipaka, then it is denoted as Prabhava.

Eg..., Arjuna is Hridya, Danti is Virechaka.

Karma (Pharmacological actions):

संयोगे च विभागे च कारणं द्रव्यमाश्रितम् । कर्तव्यस्य क्रिया कर्म, कर्म नान्यदपेक्षते ॥ (C.S.Su 1/52)

The inseperable reason for the Samyoga (association) and Vibhaga (dissociation) of a drug in exhibiting its pharmacological action is known as Karma and it is independent.

Eg.., Vamana, Virechana, Brimhana, Langhana etc.

1.3 Glossary

To summarize the chapter here are the few important points –

- Dravyaguna is the Shastra (science) which deals with the Guna (properties), Karma (actions) and Prayoga (therapeutic utility) of the Dravya.
- Knowledge of Aushadha (Dravya) is important in maintaining the health.
- Panchapadarthas (Five constituents) of Dravyaguna
  - Rasa
  - Guna
  - Veerya
  - Vipaka
  - Prabhava
- Saptapadarthas (Seven constituents) of Dravyaguna
  - Dravya
  - Rasa
  - Guna
  - Veerya
  - Vipaka
  - Prabhava
  - Karma

1.4. Exercise

Short Answers

1. Define Dravyaguna Shastra
2. Write about importance of Dravyaguna
3. Panchapadarthas of Dravyaguna
4. Saptapadarthas of Dravyaguna

Multiple Choice Questions

1. How many padarthas are there as per Dravyaguna?
   a. 5 b. 6 c. 7 d. 9
2. Dravya is dependent on?
   a. Rasa b. Guna c. Veerya d. Vipaka
3. Concept of panchapadarthas are mentioned by?
   a. Bhapamishra b. Charaka
   c. Sushruta d. Vagbhata

Answer Key		
1 c	2 b	3 a

Bibliography

1. Agnivesha (1998). Charaka Samhita (Vol 1-2). Redacted by Charaka: Hindi commentary by Kashinatha Shastri, Gorakhanatha Chaturvedi: Rajeshwaradatta Shastri, Yadunandana Upadhaya, Ganga Sahaya Pandeya, Banarasidasa Gupta (eds), Varanasi. Chaukhambha Bharati Academy.
2. Sharma P. V. (1984). Dravyaguna Vignyana. Varanasi. Chaukhambha Bharati Academy.
3. Bhavamishra (2012), Bhava Prakasha Samhita, (Vol -1), commentary by Dr.Bulusu Sitaram, Chaukhambha Orientalia.
4. Vagbhata (1997). Astanga Hridaya (12th ed.). Hindi commentary Vidyotini by Atrideva Gupta: Yadunandana Upadhyaya (ed.), Varanasi. Chaukhambha Sanskrit Sansthan.
5. Shastry J.L.N., Nesari M. Tanuja. (2019). A text book of Dravyaguna Vijnana (Reprint., Vol 1-2). Varanasi. Chaukhambha Orientalia.

Chapter No.: 2

Dravya

Dr. Sowmyashree. K. M

Objectives of the Chapter

1. **Classify Dravya based on Utpatti, Yonibheda, Prayogabheda and Prabhavabheda**
2. **Classify Dravya based on Doshaghnabheda, Rasabheda, Karmabheda**
3. **Describe Panchabhoutikatva of Dravya**

Topics in the Chapter:

1. **Panchabhoutikatwa of Dravya**
2. **Classification of Dravya based on Utpattibheda, Yonibheda, Prayogabheda, Prabhavabheda, Doshaghnabheda, Rasabheda and Karmabheda**

Introduction:

Dravya is one of the six Padarthas accepted by Ayurveda and Vaisheshika Darshana and seven Padarthas of Nyaya Darshana. It is the foremost concept among all the Padarthas. The term 'Dravya' means a substratum, matter, substance, or any substance which has a quality (Guna) and exhibit activity (Karma). Dravya exists with an inseparable relationship (Samavaya) with the attributes of quality and action. Among the six Padarthas, Dravya is the most essential part to understand the existence of the other five Padarthas. Acharya Sushruta explained the pradhanyata (superiority) of Dravya by stating that, Vipaka, Veerya, Rasa etc are dependent on Dravya. Dravya is the basis for any study which is used as a drug or formulation in the treatment. So, it is very much important to understand thoroughly from the treatment point of view. It is a cause (Karana) behind the effect (Karya) as per the Karya-Karana Siddhanta (cause-and-effect theory). A Dravya is a substance from which something is made and derived. The universe has innumerable number of Dravyas with multiple properties. Similarly, permutation and combination of Dravya

and its properties leads to infinite number of effects. It becomes challenging to study these dravyas separately and to practice them individually. So, Dravya is classified in different ways for easy understanding & its application in therapeutics.

Dravya Shabda Vyutpatti:

द्रव्यं - द्रोरिव । द्रु + द्रव्यञ्च भव्ये । (Vachaspatyam)

The Sanskrit word 'Dravya' is derived from 'dru-gatau' Dhatu (verb) having 'yat' Pratyaya (suffix). It means anything which has movement and attainment or which changes to resultant is known as Dravya.

द्रवति - गच्छति परिणाममभीक्ष्णमिति द्रव्यम् । (Nyaya darshana)

Nyaya Darshana enumerates that which has the movement and which seeks the transformation is called as Dravya.

द्रवति - गच्छति संयोगविभागादिगुणानिति वा द्रव्यम् । (Nyaya Darshana)

That which helps for combination and separation is called Dravya.

Definition of Dravya:

यत्राश्रिता कर्मगुणा: कारणं समवायि यत् । तद्द्रव्यं..॥ (C.S.Su.1/51)

यत्राश्रिता यत्र समवेता: कर्म च गुणाश्च कर्म गुणा: । कारणं समवायि यदिति समवायि कारणं यत्, द्रव्यमेव हि द्रव्यगुणकर्मणां समवायिकारणम् । समवायिकारणं च तद् यत् स्वसमवेतं कार्यं जनयति; गुणकर्मणी तु न स्वसमवेतं कार्यं जनयत:, अतो न ते समवायिकारणे । (Chakrapanidutta commentary on C.S.Su1/51)

द्रव्य लक्षणं तु क्रिया गुणवत् समवायि कारणमिति । (S.S.Su 40/3)

Acharya Charaka & Sushruta defines Dravya as the substance in which the Guna (quality) and Karma (action) exist with an Samavayi Sambandha (inseparable relationship) with each other and which is the ultimate cause for Karya. The capacity to produce something out of its own is seen only in Dravya. Neither the Guna (qualities) nor Karma (actions) can be produced out of their own. Hence, they are in inseparable relation with the Dravya.

2.1 Panchabhoutikatwa of Dravya

The term Bhuta is derived from 'भू सत्तायाम्' means that which exists or which is real.

सर्वं द्रव्यं पाञ्चभौतिकमस्मिन्नर्थे । (C.S.Su 26/10)

All the Dravyas in the universe are made up of Panchamahabhutas (five basic elements). It means that everything in the universe is made and developed from the five basic elements. Similarly, the human body is also considered as

Panchabhoutika as the body is embodiment of universe. All that are exist in the universe is present in human body (यत् पिण्डे तत् ब्रह्माण्डे). Based on this theory, Ayurveda accepted the concept of Panchamahabhuta. Even the Tridoshas, Dhatus and Malas are also evolved from Panchamahabhutas. Sushruta stated that, पञ्चभूतात्मके देहे ह्याहार: पाञ्चभौतिक: - the growth and development of the body is done through the Ahara, which is also Panchabhoutika in nature. The Shareera or body is Panchabhoutika and the Dravyas used for treatment also are composed of Panchamahabhoota.

पञ्चभूतात्मकं तत्तु क्ष्मामधिष्ठाय जायते । अम्बुयोन्यग्निपवननभसां समवायत: ॥
तन्निर्वृत्तिर्विशेषश्च, व्यपदेशस्तु भूयसा ॥ (A.H.Su 9/1-2)

Even though all the Dravyas have Mahabhutas, depending on the predominance of the Mahabhuta, the Dravyas are categorized into five divisions: Parthiva, Apya, Tejasa, Vayaviya and Akashiya Dravya. A Dravya is said to be of a particular Mahabhuta, if it forms a major constituent of the Dravya. Due to the dominance of single Mahabhuta, the specific actions and properties are seen in those Dravyas. One Dravya may contain one Mahabhuta in more quantity, while another Dravya may contain it in lesser quantity. Based on this principle, the properties and actions of that dominant Mahabhuta will be seen in that particular Dravya.

For example: Both Guduchi and Chandana alleviates pitta. But Chandana is more Pittahara in comparison to Guduchi because of the Sheeta Guna of Jala Mahabhuta. So Jala Mahabhuta is more in Chandana than Guduchi.

Panchamahabhuta Utpatti & Paraspara Anupravesha:

In Ayurveda, the end product of the evolution of matter is Panchabhuta. The Mahabhutas which have distinct characters and attributes are of Mula Prakriti. As in the transformation of Mahat and Ahankara, the Satwa, Raja and Tamo-Gunas are existed. In the evolution process of Mahabhutas, the later Bhuta is formed from the former Bhuta. Hence the attributes of former Bhutas are passed through the later Bhuta. Every matter in the earth is formed as a result of different combination of Panchabhutas in different ways giving them different forms. These five Mahabhutas have special five sensory qualities such as Shabda, Sparsha, Rupa, Rasa and Gandha respectively. According to this principle, in the course of genesis of Mahabhuta, first Akasha Mahabhuta was created, which had only Shabda Guna in it. According to the statement आकाशाद् वायु:, Vayu Bhuta is born out of Akasha and it contains Sparsha as its Guna.

Shabdha also passes into Vayu Bhuta. Further according to the statement वायोरग्नि:, Agni Bhuta is born out of Vayu Mahabhuta. Agni Mahabhuta possess Rupa-guna in it along with Shabda, Sparsha of former Bhuta. Further, according to the statement अग्नेराप:, Jala bhuta is formed from Agni and it contains Rasaguna along with Shabda, Sparsha and Rupa of former Bhuta. Finally according to the statement अद्भ्य: पृथ्वी, Prithvi is produced from Jala and contains Gandha Guna along with Shabda, Sparsha, Rupa and Rasa of former Bhuta. Like this, the successive Mahabhutas kept on adopting one extra Guna. Thus, Prithvi Mahabhuta possesses all the five special properties in it. The main characteristic feature of the Dravya is brought by the predominant Mahabhuta present in it.

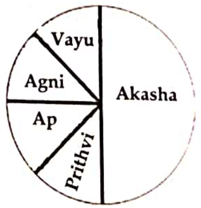
Mahabhuta	Guna
Akasha	Shabdha
Vayu	Shabdha, Sparsha
Tejas	Shabdha, Sparsha, Rupa
Ap	Shabdha, Sparsha, Rupa, Rasa
Prithvi	Shabdha, Sparsha, Rupa, Rasa, Gandha

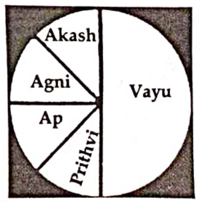
Concept of Pancheekarana:

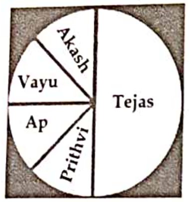
The term Pancheekarana is used by Vedanta philosophers. They mentioned that, the all five Mahabhutas are the combination of all Mahabhutas and none of them consists the qualities of only one bhuta in it. According to this theory, each of the five elements consists of half of itself and 1/8th portion of each of the other elements. In this way all the other Bhutas are formed. This is termed as Pancheekarana. For example, Prithvi Mahabhuta does not contain Prithvi bhuta alone. According to this process, Prithvi Mahabhuta consists 1/2 portion of itself and 1/8 portion of remaining four elements. Thus 1/2 + 1/8+1/8+1/8+1/8 = 1. So, it is named according to the predominance of the Bhuta present in it.

द्विधा विधाय चैकैकं चतुर्धा प्रथमं पुन: । स्वे स्वेतर द्वितीयांशैर्योजनात्पञ्च पञ्च ते ॥ (Pancha dashi)

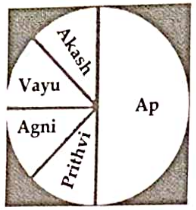
Schematic representation of Pancheekarana:



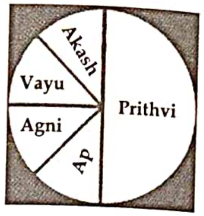




Teja



Ap



Prithvi

Mahabhuta	Akasha	Vayu	Agni	Jala	Prithvi
Akasha	1/2	1/8	1/8	1/8	1/8
Vayu	1/8	1/2	1/8	1/8	1/8
Agni	1/8	1/8	1/2	1/8	1/8
Jala	1/8	1/8	1/8	1/2	1/8
Prithvi	1/8	1/8	1/8	1/8	1/2

Panchamahabhuta and Ayurveda:

Sushruta very well explained the role of Panchamahabhutas during the formation of embryo in different stages of development.

तं चेतनावस्थितं वायुर्विभजति, तेज एनं पचति, आप: क्लेदयन्ति, पृथ्वी संहन्ति, आकाशं विवर्धयति.......। (S.S.Sh. 5/3)

The cell division takes place due to vayu Mahabhuta, agni is responsible for cellular metabolism, Jala Mahabhuta does the nourishment by giving moisture, Prithvi Mahabhuta is responsible for solidity and akasha Mahabhuta for expansion.

In the human body, these Mahabhutas are explained in terms of doshas (Vata, Pitta and Kapha), dhatus (Rasa, Rakta, Mamsa, Meda, Asthi, Majja and Shukra), Mala (Mutra, Purisha and Sweda) and also in Ahara and Aushadha. The Ahara and Aushadha Dravyas represent the Rasas (Madhura, Amla, Lavana, Katu, Tikta and Kashaya), Guna (Ruksha, Laghu etc.), Veerya (potency-Ushna & Sheeta) and Vipaka (Madhura, Amla and Katu).

Relation between Tridosha & Panchamahabhuta:

Tridoshas being a Karya Dravya, are formed by combination of Mahabhutas. In normal condition, these three doshas helps for the normal function of the body.

वाय्वाकाशधातुभ्यां वायुः, आग्नेयं पित्तं, अम्भपृथ्वीभ्यां श्लेष्मा । (A.S.Su 20/1)

- Vata – Vayu + Akasha
- Pitta – Teja
- Kapha – Ap + Prithvi

Relation between Shadrasa & Panchamahabhuta:

The six tastes in balanced quantity helps to establish the health. The formation and functions of all the rasas are based upon the Mahabhuta constitution. This is clearly mentioned by Acharya Charaka that,

रसनार्थो रसस्तस्य द्रव्यमाप: क्षितिस्तथा । निर्वृत्तौ च विशेषे च प्रत्यया: खादयस्त्रय: ॥ (Ca.S.Su 1/64)

The taste perception happens because of the Ap and Prithvi Mahabhuta. The variation in taste is caused due to other three Mahabhutas like Akasha, Vayu and Agni.

तत्र भूम्यम्बुगुणबाहुल्यान्मधुर: भूम्यग्निगुणबाहुल्यादम्ल: तोयाग्निगुणबाहुल्याल्लवण: वाय्वग्निगुणबाहुल्यात् कटुक: वाय्वाकाशगुणबाहुल्यात्तिक्त: पृथ्व्यनिलगुणबाहुल्यात् कषाय: । (Su.S.Su 42/3)

Rasa	Mahabhuta	Rasa	Mahabhuta
Madhura	Prithvi + Ap	Katu	Vayu + Teja
Amla	Prithvi + Teja	Tikta	Vayu + Akasha
Lavana	Ap + Teja	Kashaya	Prithvi + Vayu

Relation between Ahara & Panchamahabhuta:

पञ्चभूतात्मके देहे ह्याहार: पाञ्चभौतिक: । विपक्व: पञ्चधा सम्यग्गुणान् स्वानभिवर्धयेत् ॥ (Su.S.Su 46/526)

Both Shareera and Ahara is formed from Panchamahabhutas. During the digestion, the food is getting transformed by the Agni Mahabhuta. In this way the food which is taken will get assimilated and does the Poshana (nourishment) of the body.

Role of Mahabhuta in shodhana:

Panchamahabhuta has an important role in Shodhana and Shamana Karma of the Dravyas.

तत्र विरेचन द्रव्याणि पृथ्व्यम्बुगुणभूयिष्ठानि, पृथिव्यापो गुर्व्य: तानि गुरुत्वादधो गच्छन्ति, तस्माद्विरेचन मधोगुणभूयिष्ठमनुमानात्; वमनद्रव्याण्यग्निवायुगुणभूयिष्ठानि, अग्निवायु हि लघु, लघुत्वाच्च तान्यूर्ध्वमुत्तिष्ठं, उभयगुणभूयिष्ठमुभयतोभागं, आकाशगुणभूयिष्ठं संशमनं, साङ्ग्राहिकमनिलगुणभूयिष्ठं, अनिलस्य शोषणात्मकत्वात्; दीपनमग्निगुणभूयिष्ठं, तत्समानत्वात्; लेखनमनिलानलगुणभूयिष्ठं, बृंहणं पृथिव्यम्बुगुणभूयिष्ठं, एवमौषधकर्माण्यनुमानात् साधयेत् । (Su.S.Su 41/6)

Acharya Sushruta mentioned as the Virechana Dravyas possess Prithvi and Ap Mahabhuta. These Mahabhutas guru in nature, thereby helps to move the doshas in downward direction. Vamana Dravyas possess Agni and Vayu Mahabhuta predominant. As Agni and Vayu are light, helps the doshas to move in upward direction. Samshamana Dravyas are having Akasha Mahabhuta,

Grahi Dravyas are predominant with Vayu Mahabhuta, Deepana Dravyas possess Agni Mahabhuta. Lekhana Dravyas are predominant in Vayu and Agni Mahabhuta. Brimhana Dravyas are having Prithvi and Ap Mahabhuta, which helps for the development of the body.

गुणा य उक्ता द्रव्येषु शरीरेष्वपि ते तथा ।स्थानवृद्धिक्षयस्तस्माद् देहिनां द्रव्यहेतुक: ॥ (S.S.Su 41/16)

The qualities which are present in Dravya are also present in Shareera (in the form of Dosha, Dhatu Mala etc.). So, the Sthana (normalcy) Vriddhi (increase) and Kshaya (decrease) of doshas are due to the use of substances.

Sushruta has enumerated the Mahabhuta involved in the Vriddhi and Kshaya of doshas. By proper understanding these, the wise physician can plan treatment accordingly.

भूतेजोवारिजैर्द्रव्यै: शमं याति समीरण: । भूम्यम्बुवायुजै: पित्तं क्षिप्रमाप्नोति निर्वृत्तिम् ॥
खतेजोऽनिलजै: श्लेष्मा शममेति शरीरिणाम् । वियत्पवनजाताभ्यां वृद्धिमभ्येति मारुत: ॥
आग्नेयमेव यद् द्रव्यं तेन पित्तमुदीर्यते । वसुधाजलजाताभ्यां बलास: परिवर्द्धते ॥
एवमेतद्गुणाधिक्यं द्रव्ये द्रव्ये विनिश्चितम् । द्विशो वा बहुशो वाऽपि ज्ञात्वा दोषेषु चाचरेत् ॥ (S.S.Su 41/7-9)

Effect on dosha	Mahabhuta	Effect on dosha	Mahabhuta
Vata Shamana	Prithvi, Agni, Ap	Vatavriddhi	Akasha, Vayu
Pitta Shamana	Prithvi, Ap, Vayu	Pittavriddhi	Agni
Kapha Shamana	Akasha, Agni, Vayu	Kaphavriddhi	Prithvi and Ap

By assessing the involved Mahabhuta and the dosha involved in the Rogi, the treatment plan has to be done. As per the Samanya-Vishesha Siddhanta, the Dravyas exhibiting the similar qualities are used to increase and dissimilar qualities are used to decrease of the doshas.

Eg... – In order to increase the Gurutva (heaviness or weight) in the body, one will have to administer Parthiva Dravyas. Parthiva Dravyas are predominant with the quality of Gurutva in them. On the other hand, to decrease it, the Akashiya Dravyas are used. Akashiya Dravyas are predominant with laghuguna, which helps to reduce the weight or bring lightness in the body.

Dravya is formed by an appropriate combination of Prithvi, Ap, Teja, Vayu and Akasha. The five bhutas stand for a classification of substance on the basis of their generic properties.

All Dravyas have a specific composition of Panchamahabhuta with an appropriate combination and separation (Samyoga and Vibhaga). There is a dominance of a particular Mahabhuta. This defines them as Akashiya (Akasha dominant), Vayavya (Vayu dominant), Agneya (Agni dominant), Apya (Ap dominant) and Parthiva (Prithvi dominant).

Aushadhatva of a Dravya:

भिषग्द्रव्याण्युपस्थाता रोगी पादचतुष्टयम् । (C.S.Su 9/3)

Physician, medicine, attendant and the patient, these are four components which all in their best of qualities are responsible for the cure of diseases.

बहुता तत्र योग्यत्वमनेकविधकल्पना । संपच्चेति चतुष्कोऽयं द्रव्याणां गुण उच्यते ॥ (C.S.Su 9/7)

A Dravya used in the treatment should possess the following qualities:

- Bahuta – Abundantly available
- Yogyatva – Effective
- Anekavidha Kalpana – Various pharmaceutical forms
- Sampath – Best in properties

द्रव्यैरसगुणवीर्यविपाकनिमित्ते च क्षयवृद्धि दोषाणां साम्यं च । (S.S.Su 46/3)

The Kshaya, Vriddhi and Samata of Vatadi doshas depends on the Rasa, Guna, Veerya and Vipaka of Dravya.

गुणा या उक्ता द्रव्येषु शरीरेष्वपि ते तथा । स्थानवृद्धिक्षयास्तस्माद् देहिनां द्रव्यहेतुका: ॥ (Su.S.Su 41/12)

The qualities present in Dravya are also present in Shareera. So, the Dravya is responsible for the Vriddhi (increase) and Kshaya (decrease) of Doshas.

भूतेभ्यो हि परं यस्माद् नास्ति चिन्ता चिकित्सिते । (S.S.Sh 1/13)

Other than Panchabhutas, there is no concepts which helps for the treatment. The basic factors for the formation of composition of substances (food/drug) as well as the human body are five Mahabhutas. By the use of or consumption of substances which are composed of the five Mahabhutas in varying properties and in different collocations, Vata, Pitta and Kapha of the body which are built up by the same kind of substances become vitiated, leading to the manifestation of different kinds of Vikaras (diseases). The phenomenon namely increase or decrease of Dosha, dhatu and malas either by diet or by drugs is explained with the concept of Samanya (generic concomitance) and Vishesha (variant factor) Siddhanta.

सर्वदा सर्वभावानां सामान्यं वृद्धिकारणम् । ह्रासहेतुर्विशेषश्च........................ ॥ (C.S.Su 1/44)

In the body, qualities of Panchamahabhutas are increased by administering Dravyas possessing similar qualities and the same qualities result in diminution by the intake of Dravyas (Ahara/Aushadha) possessing opposite qualities. Su-

shruta explicitly states that the decrease, increase or equilibrium of the doshas is due to Rasa, Guna And Vipaka of the Dravyas. Charaka quotes that there is no substance in the world which is non-medicinal in nature. To pacify the disease, the physician should apply proper Yukti and select the appropriate Dravya based on the status of the disease and the diseased.

The food is responsible for growth, strength, health, complexion and normal functioning of the senses. Irregularities of food results in ill health. Thus, the food as well as drugs play a crucial role in Swasthyarakshana (preserving the health) and Vyadhi Prashamana (curing the disease). For achieving these two goals, the Dravya is administered in different forms; namely Swarasa, Kalka, Kwatha, Hima Phanta, Asava, Arishta, Sneha etc.

अनेनोपदेशेन नानौषधिभूतं जगति किञ्चिद्द्रव्यमुपलभ्यते। तां तां युक्तिमर्थं च तं तमभिप्रेत्य ॥ (C.S.Su 26/12)

अनेनं निदर्शनेन नानौषधिभूतं जगति किञ्चिद्द्रव्यमस्ति।

द्रव्यमुस्तीति कृत्वा तं नं युक्ति विशेषमथं चाभिसमीक्ष्य स्ववीर्य गुणयुक्तानि द्रव्याणि कार्मुकारण भवन्ति। (S.S.Su 41/5)

Acharya Charaka explains that there is nothing in the world which does not have therapeutic utility in appropriate conditions and situations. Chakrapani further clarifies that though every substance can be used as a therapeutic agent, it must be remembered that everything cannot be used for the treatment of every disease. A drug is useful in specific conditions and situations. So, the selection of drugs is to be made in accordance with the priority of its administration and therapeutic needs. Certain drugs which are unwholesome by nature like immature curd (Curd which is not formed properly). The poison can produce wholesome effect if used properly. So, all the Dravyas can be used as Aushadha to maintain the normal health.

2.2 Classification of Dravyabased on Utpattibheda, Yonibheda, Prayogabheda, Prabhavabheda, Doshaghnabheda, Rasabheda and Karmabheda

In the universe, there are innumerable Dravyas; which are generated from Panchamahabhutas. To be used, their identification and classification is necessary. The internal and external similarities of material and their properties and actions are the basis for classification.

The different classification of Dravyas has been mentioned in Ayurveda. One such classification mentioned by Acharya Charaka is based on the cause-and-effect relationship (Karya-Karana Siddhanta). The Dravyas are classified into

two main categories: Karana Dravya and Karya Dravya. Karana Dravyas are the causative factors that are responsible for all results. The Karana Dravyas are the major part of any creation in the whole universe as described by the Acharyas and Darshana Granthas. The Nava Karana Dravyas are Prithvi, Ap, Tejas, Vayu, Akasha, Atma, Manas, Kala, and Disha. All Karya Dravya in the universe is the result of Karana Dravya. The details of these classification have been already dealt in the Padartha Vijnana.

A. Classification of Dravyas according to their Utpatti (origin):

Dravyas according to their Panchabhautika constitution are classified into five: Parthiva, Apya, Taijasa, Vayaviya and Akashiya. The basis for this classification is the predominance of particular Mahabhuta. Though all the Dravyas are Panchabhautika, predominant Mahabhuta of particular Dravya decides the

तत्र पृथिव्यप्तेजोवाय्वाकाशानां समुदायाद् द्रव्याभिनिर्वृत्तिः, उत्कर्षस्त्वभिव्यञ्जको भवति - इदं पार्थिवमिदमाप्यमिदं तैजसमिदं वायव्यमिदमाकाशीयमिति। (S.S.Su 41/3)

Substances are born from the combination of Prithvi, Ap, Tejas, Vayu and Akasha. The element which is predominant among these becomes the cause for their classification such as Parthiva, Apya, Taijasa, Vayaviya and Akashiya.

Dravya →
- Parthiva Dravya
- Apya Dravya
- Tejasa Dravya
- Vayavya Dravya
- Akashiya Dravya

a. Parthiva

तत्र द्रव्याणि गुरुखरकठिणमन्दस्थिरविशदसान्द्रस्थूलगन्धगुणबहुलानि पार्थिवानि, तान्युपचयसंघातगौरवस्थैर्यकराणि। (C.S.Su 26/11)

Parthiva Dravyas have properties of Guru (heavy), Khara (rough), Kathina (hard), Manda (slow), Sthira (stable), Vishada (clear), Sandra (solid), Sthula (gross), possess the predominant Gandha Guna; exert actions like, Upachaya (development), Sanghata (compactness), Gourava (heaviness), Sthairya (firmness).

तत्र स्थूलसान्द्रमन्दस्थिरगुरुकठिनं गन्धबहुलमीषत्कषायं प्रायशो मधुरमिति पार्थिवं; तत् स्थैर्यबलगौरवसंघातोपचयकरं विशेषतश्चाधोगतिस्वभावमिति। (S.S.Su 41/4)

Substances which have the below mentioned qualities are said to be Parthiva (predominant of Prithvi Bhuta). They are: Sthula (gross), Sandra (thick), Manda (slow), Sthira (stable), Guru (heavy), Kathina (hard), Gandha Bahula (prominent

odour), Madhura Rasa Pradhana (generally sweet in taste), slightly Kashaya (astringent). Parthiva Dravyas bestow Sthairya (stability), Bala (strength), Gourava (heaviness), Sanghata (compactness) and Upachaya (development), Adhogami (especially have a tendency of moving downward).

b. Apya

द्रवस्निग्धशीतमन्दमृदुपिच्छिलरसगुणन्याप्यानि, तान्युपक्लेदस्नेहबन्धविष्यन्दमार्दवप्रह्लादकराणि ।

(C.S.Su 26/11)

Apya Dravyas have properties of Drava (liquid), Sheeta (cold), Manda (slow), Mrudu (soft), Picchila (slimy), Rasa guna predominant; exert actions like, Upakleda (moistening), Snehana (unctuousness), Bandha (binding), Vishyandana (secretion), Mardava (softening) and Prahlada (exhilaration).

शीतस्तिमितस्निग्धमन्दगुरुसान्द्रमृदुपिच्छिलं रसबहुलमीषत्कषायाम्ललवणं मधुररसप्रायमाप्यम् ।

तत् स्नेहनह्लादनक्लेदनबन्धनविष्यन्दनकरमिति ॥ (S.S.Su 41/5)

Substances which have the below mentioned qualities are said to be Apya (predominant of Ap Bhuta). They are: Sheeta (cold), Stimita (static), Snigdha (unctuous), Manda (slow), Guru (heavy), Sandra (thick), Mrudu (soft), Picchila (slimy), Rasabahula (tasty), Madhura-Amla-Lavana Rasa Pradhana and slightly Kashaya (astringent) rasa. Apya Dravyas bestow Snehana (unctuousness), Hladana (pleasant), Kledana (moistening), Bandhana (binding) and Vishyandana (promotes secretion).

c. Taijasa

उष्णतीक्ष्णसूक्ष्मलघुरूक्षविशदरूपगुणबहुलान्यग्नेयानि, तानि दाहपाकप्रभाप्रकाशवर्णकराणि ।

(C.S.Su 26/11)

Taijasa Dravyas have properties of Ushna (hot), Teekshna (sharp), Sukshma (subtle), Laghu (light), Ruksha (dry), Vishada (clear), Rupaguna predominant; exert actions like, Daha (burning), Paka (digestion), Prabha (lusture), Prakasha (illumination), Varna (colour).

उष्णतीक्ष्णसूक्ष्मखरलघुविशदंरूपगुणबहुलमीषदम्ललवणं कटुकरसप्रायंविशेषतश्चोर्ध्वगतिस्वभावमिति तैजसम् ।तद्दहनपचनदारणतापनप्रकाशनप्रभावर्णकरमिति । (S.S.Su 41/6)

Substances which have the below mentioned qualities are said to be Taijasa (predominant of Agnibhuta). They are: Ushna (hot), Teekshna (sharp), Sukshma (subtle), Khara (rough), Laghu (light), Vishada (clear), Rupa bahula (prominent in appearance), Katurasa Pradhana (pungent), slightly Amla-Lavana rasa (sour and salty), have the special tendency to move upwards. Taijasa Dravyas bestow

Dahana (burning), Pachana (digestion), Darana (bursting), Tapana (heating), Prakashana (illuminating), Prabha (lusture) and Varna (colour).

d. Vayaviya

लघुशीतरुक्षखरविशदसूक्ष्मस्पर्शगुणबहुलानि वायव्यानि, तानि रौक्ष्यग्लानिविचारवैशद्यलाघवकराणि।

(C.S.Su 26/11)

Vayaviya Dravyas have properties of Laghu (light), Sheeta (cold), Ruksha (dry), Khara (hard) Vishada (clear), Sukshma (subtle), Sparsha Guna predominant; exert actions like, Roukshya (dryness), Glani (fatigue), Vichara (thought process in mind), Vaishadya (non-sliminess), Laghava (lightness).

सूक्ष्मरूक्षखरशिशिरलघुविशदंस्पर्शबहुलमीषतिक्तं विशेषत: कषायमिति वायवीयम् । तद्वैषद्यलाघवग्लानिरूक्षणविचारणकरमिति । (S.S.Su 41/7)

Substances which have the below mentioned qualities are said to be Vayaviya (predominant of Vayu Bhuta). They are: Sukshma (subtle), Ruksha (dry), Khara (rough), Shishira (cold), Laghu (light), Vishada (clear), Sparshabahula (prominently tactile), predominantly Kashaya (astringent), slightly Tikta (bitter) taste. Vayaviya Dravyas bestow Vaishadya (non-sliminess), Laghava (lightness), Glani (fatigue), Virukshana (dryness), Vicharana (various thought process in mind).

e. Akashiya

मृदुलघुसूक्ष्मश्लक्ष्णशब्दगुणबहुलान्याकांशात्मकानि, तानि मार्दवसौषिर्यलाघवकराणि । (C.S.Su 26/11)

Akashiya Dravyas have properties of Mrudu (soft), Laghu (light), Sukshma (subtle), Shlakshna (smooth), Shabdhaguna predominant; exert actions like, Mardava (softness), Soushirya (hollowness), Laghava (lightness).

श्लक्ष्णसूक्ष्ममृदुव्यवायिविशदविविक्तमव्यक्तरसंशब्दवहुलमाकाशीयंतन्मार्दवसौषिर्यलाघवकपूमिति ।

(S.S.Su 41/8)

Substances which have the below mentioned qualities are said to be Akashiya (predominant of Akasha Bhuta). They are: Shlakshna (smooth), Sukshma (subtle), Mrudu (soft), Vyavayi (quick spreading), Vishada (clear), Vivikta (separating), Avyakta Rasa (no taste), Shabda Bahula (predominant with sound). Akashiya Dravyas bestow Mardava (softness), Soushirya (hollowness), Laghava (lightness).

B. Classification of Dravyasaccording to their Yoni (source)

1. तत् पुनस्त्रिविधं प्रोक्तं जङ्गमौद्भिदपार्थिवम् । (C.S.Su 1/68)

According to Charaka, Dravyas are of three types based on the source or origin – Jangama, Oudbhida and Parthiva.

a. Jangama (Animal products)-

मधूनि गोरसाः पित्तं वसा मज्जाऽसृगामिषम् । विण्मूत्रचर्मरेतोस्थिस्नायुशृङ्गनखाः खुराः ॥

जङ्गमेभ्यः प्रयुज्यन्ते केशा लोमानि रोचनाः ॥ (C.S.Su 1/68-69)

Dravyas which have an animal origin, such as honey, milk & its products, bile, fat, bone-marrow, blood, flesh, faeces, urine, skin, semen, bone, ligament, horn, nail, hoof, hairs etc. are considered as Jangama Dravyas.

b. Audbhida (Plant products)-

औद्भिद्य पृथ्वीं जायते इति औद्भिदम् । (Chakrapanidatta commentary on C.S.Su 1/68)

Dravyas which sprouts and grows by piercing the soil are known as Audbhida Dravyas.

..................................औद्भिदं तु चतुर्विधम्।

वनस्पतिस्तथा वीरुद्वानस्पत्यस्तथौषधिः ॥ फलैर्वनपतिः पुष्पैर्वानस्पत्यः फलैरपि ।

ओषध्यः फलपाकान्ताः प्रतानैर्वीरुधः स्मृताः ॥ (C.S.Su71-72)

Dravyas of vegetable origin are Audhbhida. Audbhida Dravyas are again classified into 4 types on the basis of their nature.

Audbhida Dravya →
- Vanaspati
- Virudha
- Vanaspatya
- Aushadhi

मूलत्वक्सारनिर्यासनाम स्वरसपल्लवाः । क्षाराः क्षीरं फलं पुष्पं भस्मतैलानि कण्टकाः ॥

पत्राणि शुङ्गा कन्दाश्च प्ररोहाश्चौद्भिदो गणः ॥ (C.S.Su 1/23)

Charaka mentioned about Audbhida Gana. Different parts of the plant and their byproducts are mentioned in this Gana.

- Mula (Root)
- Twak (Root)
- Sara (Heart wood)
- Niryasa (Exudate/resin)
- Nala (Tube)
- Swarasa (Juice)
- Pallava (Tender leaves)
- Kshara (Alkaline preparation)
- Kshira (Latex)
- Phala (Fruit)
- Pushpa (Flower)
- Bhasma (Ash)
- Taila (Oil)
- Kantaka (Throns/spine)
- Patra (Leaf)
- Shunga (Terminal buds)
- Kanda (Tuber)

c. Parthiva (Mineral)

सुवर्णं समलाः पञ्च लोहाः ससिकताः सुधा । मनःशिलाले मणयो लवणं गैरिकाञ्जने॥ (Ca.S.Su 1/70)

Dravya obtained from the earth such as metals and mineral products such as gold, five metals (lohas), silver, copper, lead, and tin, along with their excreta silica, calcites, realgar, orpiment, etc.

2. ....द्रव्याणि पुनरोषधयः । तासु द्विविधः - स्थावरा जाङ्गमश्च । (S.S.Su 1/28)

As per Sushruta Samhita, Dravyas are categorized into two- Sthavara and Jangama.

C. Classification of Dravyasaccording to their Prayoga (Therapeutic application):

Depending to the usage, Dravyas are of two types, Ahara Dravya (dietary) and Aushadha Dravya (medicinal). While commenting on different Yavagu preparations on Charaka Samhita 2nd chapter (Apamargatanduliyaadhyaya), Chakrapani opined that:

यवागू साधनद्रव्यं तावद् द्विविधं वीर्य प्रधानमौषधद्रव्यं रसप्रधानमाहारद्रव्यञ्च ।

यद् द्रव्यमुपयुक्तं देहे रसधातु तद् द्वारा रक्तादि धातुश्च प्राधान्येनपुष्पाति, न त्वौषधद्रव्यवत् प्रधानतया देहे शीतोष्णादीन् वीर्यसंज्ञकान् गुणाञ्जनयति तद् रसप्रधानं, तदाहारद्रव्यं, यव गोधूमादि । (C.S.Su 2/17)

1. Ahara Dravya (dietary articles): These are Rasa Pradhana (predominantly dependent on taste) in nature, used to nourish Rasadi Dhatus. Ahara Dravya protects the body and helps in the maintenance of health. Eg.. – Mudga, Shali etc.

   अत्र चतुष्पलद्रव्याभिधानं रसप्रधानद्रव्याभिप्रायेणैव । (C.S.Su. Chakrapani 2/17)

   Aa Ahara Dravyas are dependent on the taste, dosage is 4 pala.

2. Aushadha Dravya (medicines): They are Veerya pradhana (dependent on potency) in nature. Aushadha or drugs are used to treat the disease. Eg.. – Chitraka, Shunti etc. They act on the body through the potency of drugs.

   तत्राप्यौषधद्रव्यं त्रिविधं वीर्य भेदात् तीक्ष्ण वीर्य यथा शुण्ठ्यादि, मध्यवीर्य बिल्वाग्निमन्थादि, मृदुवीर्यञ्चामलकादि । (C.S.Su. 2/17, Chakrapani)

Aushadha Dravyas are further classified into-

- Teekshna Veerya Dravya (sharp): Shunti (*Zingiber officinale* Roscoe).
- Madhyama Veerya Dravya (moderate): Bilva (*Aegle marmelos* (L.) Correa) Agnimantha (*Clerodendrum phlomidis* L.f).
- Mridu Veerya Dravya (mild): Amalaki (*Emblica officinalis* Gaertn)

Dravya
- Aushadha Dravya
  - Tikshnaveerya
  - Madhyaveerya
  - Mruduveerya
- Ahara Dravya

D. Classification of Dravyasaccording to their Prabhava (Effect):

According to Charaka, Dravyas are of three types based on Prabhava -

किञ्चिद्दोषप्रशमनं किञ्चिद्धातुप्रदूषणम् । स्वस्थवृत्तौ मतं किञ्चित्त्रिविधं द्रव्यमुच्यते ॥ (C.S.Su 1/67)

Dravya →
- Doshaprashamana (Pacifying the doshas)
- Dhatupradushana (Vitiating the dhatus)
- Swasthavruttakara (Maintaining the health)

a. Dosha Prashamana (Pacifying the doshas) Dravya –

किञ्चिदिति न सर्वम् । दोषस्य दोषयोर्दोषाणां वा प्रशमनं दोष प्रशमनम् । दोषग्रहणेन दुष्टा रसयोऽपि ग्रह्यन्ते । द्रव्यमहिम्ना यद्घोषाणां दुष्टानां रसादीनां धातूनां वा शमकमामलकदुरालभादि तद्गृह्यते । आमलकं हि शिवत्वात्रिदोषहरं; दुरालभा चापि वातपित्तश्लेष्महरी । यद्यपि चामलकस्य " हन्ति वातं तदाम्लत्वात् " इत्यादिना गुण द्वारा त्रिदोषहरत्वमुच्यते, तथाऽपि तत्प्रभाव वृहित मेव वोद्धव्यम् । यतस्तत्राम्लत्वादिना पित्तादि कोपोऽपि युज्यते, स त्वामलकप्रभावन्न भवति । (C.S.Su. 1/67, Chakrapani)

Dravyas which mitigates vitiated Vatadi Dosha and vitiated Rasadi Dhatus and bring it to a state of haemostasis are called Doshaprashamana Dravya. Eg.. – Amalaki, Duralabha etc. Amalaki is Tridoshahara and Duralabha is Vata-Pittahara.

b. Dhatu pradushana (Vitiating the dhatus) Dravya –

धातुप्रदूषणमिति वातादीनां समत्वेन शरीरधारणात्मकानां तथा रसादीनां च दूषणं किञ्चित्, यथा - (यवकमन्दक विषादि) । (C.S.Su. 1/67, Chakrapani)

Dravyas which vitiate the Vatadi Tridoshas and Rasadi Dhatus are termed as Dhatu pradushana Dravyas. Eg.. – Yavaka & Mandaka Visha.

c. Swasthavrittakara (Maintaining the health) Dravya –

सुष्ठ अवतिष्ठते नीरोगत्वेनेति स्वस्थः, तस्य: वृत्तिः स्वस्थरूपतया अनुवर्तनं, तत्र स्वस्थवृत्तौ मतमभिमतं पूजितमिति यावत् । अत्रोच्यतेस्वस्थवृत्तिमतं रक्तशाल्यादि दोषप्रशमनपि भवति, परं तत् प्राय: स्वस्थवृजिहित्वात् स्वस्थवृत्तिमतत्वेन गृह्यते । (Chakrapani commentary on c.s.su 1/67)

The person which is devoid of any disease condition is known as healthy person. The regimen and activities performed for the protection of the health is known as Swasthvritta. Dravyas which are beneficial for the Swatha person (healthy), that which helps to maintain the Swasthya (healthy status) are called as Swasthavrittakara Dravyas. Swasthavrittikara Dravyas may also do the Dosha Prashamana also. Eg.. – Rakta Shali, Godhuma.

E. Classification of Dravyas according to their Doshaghna Bheda (Effect on Doshas):

According to Vagbhata, Dravyas are of three types –

शमनं कोपनं स्वस्थहितं द्रव्यमिति त्रिधा । (A.H.Su 1/16)

a. Shamana Dravya (Subsides the doshas)

b. Kopana Dravya (Aggravates the doshas)

c. Swasthahita Dravya (Maintains the normalcy)

Dravya
- Shamana
  - Vata Shamana
  - Pitta Shamana
  - Kapha Shamana
- Kopana
  - Vata Shamana
  - Pitta Shamana
  - Kapha Shamana
- Swasthahita

1. **Shamana Dravya (Subsides the doshas):** Dravya which pacifies the aggravated doshas is called Shamana Dravya. Based on the Doshas, they are again classified into three types.

a. **Vata Shamana Dravya–** Dravyas which pacifies the aggravated Vata Dosha in the body have the following properties.

तत्र मधुराम्ललवणा वातघ्ना: । गुरुपाकी वातपित्तघ्न: । (S.S.Su 41/11)

रूक्ष: शीतो लघु: सूक्ष्मश्चलोऽथ विशद: खर: । विपरीतगुणैर्द्रव्यैर्मारुत: सम्प्रशाम्यति । (C.S.Su 1/59)

तत्र उष्ण स्निग्धौ वातघ्नौ । (S.S.Su 42/4)

Properties	
Rasa	Madhura, Amla, Lavana
Guna	Snigdha, Guru, Sthula, Sthira, Picchila, Shlakshna
Veerya	Ushna
Vipaka	Madhura

तत्र भद्रदारु कुष्ठहरिद्रावरुणमेषशृङ्गीवलातिवलार्तगलाच्छुराशल्लकीकुवेराक्षि वीरतरु सहचराग्निमन्थवत्सादन्येरण्डाश्मभेदकालर्कशतावरी पुनर्नवावसुकवशिरकाञ्चनकभार्ङ्गीकार्पासीवृश्चिकालीपत्तूरवदरयवकोलकुलत्थप्रभृतीनिविदारिगन्धादिश्च द्वे चाद्ये पञ्चमूल्यौ समासेन वातसंशमनो वर्ग: । (S.S.Su 39/7)

Bhadradaru	Sahachara	Bharangi
Kushta	Agnimantha	Karpasa
Haridra	Vatsadani (Guduchi)	Vrishchikali
Varuna	Eranda	Pattura (Kuchandana)
Meshashringi	Ashmabheda (Pashanabheda)	Badara
Bala	Alarka	Yava
Atibala	Arka	Kola
Artagala (Kakubha)	Shatavari	Kulattha
Kacchura	Punarnava	Vidarigandhadigana
Shallaki	Vasuka	Brihatpanchamula
Kuberakshi	Vashira (Apamarga)	Laghupanchamula
Veerataru	Kanchanaka (Dhattura)	

b. Pitta Shamana Dravya– Dravyas which pacifies the aggravated Pitta Dosha in the body have the following properties.

मधुरतिक्तकषाया: पित्तघ्ना: । (S.S.Su 42/4)

सस्नेहमुष्णं तीक्ष्णं च द्रवमम्लं सरं कटु । विपरीतगुणै: पित्तं द्रव्यैराशु प्रशाम्यति ॥ (C.S.Su 1/60)

शीत मृदु पिच्छिला: पित्तघ्ना: । (S.S.Su 41/4)

Properties	
Rasa	Madhura, Tikta, Kashaya
Guna	Ruksha, Sheeta, Manda, Sandra, Sthira
Veerya	Sheeta
Vipaka	Madhura

चन्दनकुचन्दन ह्रीवेरोशीरमञ्जिष्ठापयस्यविदारीशतावरीगुन्द्राशैवालकह्लारकुमुदोत्पलकन्द(द)लीदूर्वा-मूर्वाप्रभृतीनि ककोल्यादि: सारिवादिरञ्जनादिरुत्पलादिर्न्यग्रोधादिस्तृणपञ्चमूलमिति समासेन पित्तसंशमनो वर्ग:। (S.S.Su 39/8)

Chandana	Gundra	Kakolyadi gana
Kuchandana (Rakta Chandana)	Shaivala	Sarivadi gana
Hribera	Kalhara (Raktotpala)	Anjanadi gana
Usheera	Kumuda	Utpaladi gana

Manjishta	Utpala	Nyagrodhadi
Payasya (Kshira Kakoli)	Kandali	Trina panchamulagana
Vidari	Durva	
Shatavari	Murva	

c. Kapha Shamana Dravya– Dravyas which pacifies the aggravated Kapha Dosha in the body have the following properties.

कटुतिक्तकषाया: श्लेष्मघ्ना: । (S.S.Su 42/4)

गुरुशीतमृदुस्निग्धमधुरस्थिरपिच्छिला: । श्लेष्मण: प्रशमं यान्ति विपरीतगुणैर्गुणा: ॥ (C.S.Su 1/60)

तीक्ष्णरूक्षविशदा: श्लेष्मघ्ना: । (S.S.Su 41/4)

Properties	
Rasa	Katu, Tikta, Kashaya
Guna	Laghu, Ushna, Kathina, Ruksha, Sara, Vishada
Veerya	Ushna
Vipaka	Katu

कालेयकागुरुतिलपर्णीकुष्ठहरिद्राशीतशिवशतपुष्पासरलारास्नाप्रकीर्योदकीर्येङ्दी सुमन:काकादनी लाङ्गलकीहस्तिकर्णमुञ्जातकलामज्जकप्रभृतीनि वल्लीकण्टकपञ्चमूल्यौपिप्पल्यादिर्बृहत्यादोर्मुष्ककादिर्वचादि: सुरसादिरारग्वधादिरिति समासेन श्लेष्मसंशमनो वर्ग: । (S.S.Su 39/9)

Kaleyaka (Variety of Chandana)	Prakirya (Kantaki Karanja)	Valli panchamula
Agaru	Udakirya (Chirabilwa)	Kantakapanchamula
Tilaparni	Ingudi	Pippalyadi Gana
Kushta	Sumana (Jati)	Brihatyadi Gana
Haridra	Kakadani	Mushkakadi
Sheetashiva (Karpura)	Langalaki	Vachadi Gana
Shatapushpa	Hastikarna	Surasadi Gana
Sarala	Munjataka	Aragwadhadi Gana
Rasna	Lamajjaka (Usheera bheda)	

2. **Kopana Dravya-** Dravya which aggravates the Doshas in the body is known as Kopana Dravya.

a. **Vata Kopana Dravya-** Dravyas which aggravates the Vata Dosha in the body have the following properties.

तत्र........कटुकषायतिक्तरूक्षलघुशीतवीर्यशुष्कशाकवल्लूरवरकोद्दालककोरदूवश्यामाकनीवारमुद्गमसूराढकीहरेणुकलायनिष्पावानशनविषमाशनाध्यशनवातमूत्रपुरीषशुक्रच्छर्दिक्षवथूद्गारबाष्पवेगविघातादिभिर्विशेषैर्वायुः प्रकोपमापद्यते । (S.S.Su 21/29)

अथतिक्तकटुकषायरूक्षशीतविष्टम्भिरूढकतृणधान्यकलायचणककरीरतुम्बकालिङ्गचिर्भिटबिसशालूकजाम्बवतिन्दकहीनशुष्कप्रमिततृषिताशन शोकोत्कण्ठादिभिरतिसेवितैः वायुः प्रकोपमापद्यते । (A.S.Ni 1/)

Properties	
Rasa	Katu, Tikta, Kashaya
Guna	Ruksha, Laghu, Sheeta
Veerya	Sheeta
Vipaka	Katu

Shushkashaka	Kalaya	Tumba
Vallura (Shushkamamsa)	Nishpava	Kalinga
Varaka	Anashana	Chirbhita
Uddalaka	Vishamashana	Bisa
Koradusha	Adhyashana	Shaluka
Shyamaka	Withholding of Vatadi Vega	Jambava
Neevara	Vishtambhiahara	Tinduka
Mudga	Virudaahara	Shoka
Masura	Trina dhanya	Utkanta
Adhaki	Chanaka	
Harenuka	Kareera	

b. **Pitta Kopana Dravya-** Dravyas which aggravates the Pitta Dosha in the body have the following properties.

कट्वम्ललवणतीक्ष्णोष्णलघुविदाहितिलतैलपिण्याककुलत्थसर्षपातसीहरितकशाकगोधामत्स्याजविकमांसदधितक्रकूर्चिकामस्तुसौवीरकसुराविकारम्लफलकट्वरप्रभृतिभिः पित्तं प्रकोपमापद्यते । (S.S.Su 21/21)

कट्वम्ललवणक्षारोष्णविदाहिशुक्तशाण्डाकीमद्यमुनमस्तुदधिधान्याम्लतैलकुलत्थमाषनिष्पावतिलान्नकदवरकुठेरादिवर्गाम्रातकाम्लिकापीलु भल्लातकास्थिलाङ्गलीमरिच-मैथुनोपगमनादिभिः पित्तं प्रकोपमापद्यन्ते। (A.S.Ni.1/)

Properties	
Rasa	Katu, Tikta, Kashaya
Guna	Teekshna, Ushna, Laghu, Vidahi
Veerya	Ushna
Vipaka	Katu

Tilataila	Mastu	Tilanna
Pinyaka	Souveeraka	Kutera
Kulattha	Sura vikara	Amrataka
Sarshapa	Amla phala	Amlika
Atasi	Shukta	Peelu
Haritashaka	Shandaki	Bhallatakasthi
Godha Matsya	Madya	Langali
Aja mamsa	Dhanyamla	Maricha
Avikamamsa	Trina dhanya	Maithuna
Dadhi	Chanaka	Upagamana
Takra	Masha	
Kurchika	Nishpava	

c. **Kapha Kopana Dravya -** Dravyas which aggravates the Pitta Dosha in the body have the following properties.

दिवास्वप्नाव्यायामालस्यमधुराम्ललवणशीतस्निग्धगुरुपिच्छिलाभिष्यन्दिहायनकयवकनैषधेत्कटमाषमहामाषगोधूमतिलपिष्टविकृतिदधिदुग्धकृशरापायसेक्षुविकारानूपौदकमांसवसाबिसमृणालकसेरुकशृंङ्गाटक मधुर-वल्लीफलसमशनाध्यशनप्रभृतिः श्लेष्मा प्रकोपमापद्यते । (S.S.Su 21/23)

मधुराम्ललवणशीतस्निग्धगुरुपिच्छिलाभिष्यन्दिहायनकथवकनैषधेत्कटमाषमहामाषगोधूमतिलपिष्टविकृतिदधिदुग्धकृशरापायसेक्षुविकारानूपौदकमांसबिसमृणालकसेरुकशृङ्गटकमधुरवल्लीफलसमशनप्रभृतिभिः श्लेष्मा प्रकोपमापद्यते । (A.S.Ni.1/)

Properties	
Rasa	Madhura, Amla, Lavana
Guna	Sheeta, Snigdha, Guru, Picchila, Abhishyandi
Veerya	Sheeta
Vipaka	Madhura

Hayanaka (variety of dhanya)	Payasa	Adhyashana
Yava	Ikshuvikara	
Naishadha	Oudakamamsa	Kalinga
Itkata	Vasa	Chirbhita
Masha	Bisa	Bisa
Mahamasha	Mrunala	Shaluka
Godhuma	Kaseruka	Jambava
Tila	Shringataka	Tinduka
Pishtavikriti	Madhura phala	Shoka
Dadhi	Valli phala	Utkanta
Krishara	Samashana	

d. **Swasthahita Dravya–** Dravya which balances the Doshas and maintains the health status of the body.

यदाहारजातमग्निवेश ! समांश्चैव शरीरधातून् प्रकृतौ स्थापयति विषमांश्च समीकरोतीत्येतद्धितं विद्धि, विपरीतं त्वहितमिति । (C.S.Su 25/33)

The food articles that maintain the equilibrium state in the Dhatus and help in eliminating the abnormalities can be considered as Hita-Ahara (wholesome food), while those act in the opposite manner are considered as Ahita-Ahara (unwholesome).

षष्टिकाञ्छालिमुद्गांश्च सैन्धवामलके यवान् । आन्तरीक्षं पयः सर्पिर्जाङ्गलं मधु चाभ्यसेत् ॥
तच्च नित्यं प्रयुञ्जीत स्वास्थ्यं येनानुवर्तते । अजातानां विकाराणामनुत्पत्तिकरं च यत् ॥ (C.S.Su 5/12)

According to Acharya Charaka the list of foods those are advisable to consume daily are:

Shashtika Shali, Mudga, Saindhavalavana, Amalaki, Yava, Antariksha Jala, Goghrita, Goksheera, Jangalamamsa, Madhu; which maintains the health as well as prevent the onset of disease.

शीलयेच्छालिगोधूमयवषष्टिकजाङ्गलम् । सुनिषण्णकजीवन्तीवालमूलकवास्तुकम् ॥
पथ्यामलकमृद्वीकापटोलीमुद्गशर्कराः । घृतदिव्योदकक्षीरक्षौद्रदाडिमसैन्धवम् ॥
त्रिफलां मधुसर्पिर्भ्यां निशि नेत्रबलाय च । स्वास्थ्यानुवृत्तिकृद्यच्च रोगोच्छेदकरं च यत् ॥ (A.H.Su 8/42-44)

Acharya Vagbhata explains some of the extra Dravyas like Godhuma, Sunishannaka, Jeevanthi, Balamulaka, Pathya, Mrudwika, Patoli, Sharkara, Dadima can be consumed habitually.

F. Classification of Dravyas according to their Rasabheda (taste):

Based on Rasa (taste), Dravyas are divided into 6 categories:

a. Madhura skandha
b. Amla skandha
c. Lavana skandha
d. Katu skandha
e. Tikta skandha
f. Kashaya skandha

a. Madhura Skandha

जीवकर्षभकौ जीवन्ती वीरा तामलकी काकोली क्षीरकाकोली मुद्गपर्णी माषपर्णी शालपर्णी पृश्निपर्ण्यसनपर्णी मधुपर्णी मेदा महामेदा कर्कटशृङ्गी शृङ्गाटिका छिन्नरुहाच्छत्रऽतिच्छत्रा श्रावणी महाश्रावणी सहदेवा विश्वदेवा शुक्ला क्षीरशुक्ला बलाऽतिबला क्षीरविदारी क्षुद्रसहा महासहा ऋष्यगन्धाऽश्वगन्धा वृश्चीरः पुनर्नवा बृहती कण्टकारीकोरुबको मोरटः श्वदंष्ट्रा संहर्षशतावरी शतपुष्पा मधूकपुष्पी यष्टीमधु मधूलिका मृद्वीका खर्जूरं परुषकमात्मगुप्ता पुष्करवीजं कशेरुकं राजकशेरुकं राजादनं कतकं काश्मर्यं शीतपाक्योदनपाकी तालखर्जूरमस्तकमिक्षुरिक्षुवालिका दर्भः कुशः काशः शालिगुन्द्रेत्कटः शरमूलं राजक्षवकः ऋष्यप्रोक्ता द्वारदा भारद्वाजी वनत्रपुष्यभीरुपत्री हंसपादी काकनासिका कुलिङ्गाक्षी क्षीरवल्ली मधुवल्ली चेति;..... । (C.S.Vi 8/139)

काकोल्यादिक्षीरघृतवसामज्जशालिषष्टिकयवगोधूममाषशृङ्गाटककशेरुकत्रपुसैर्वारुकार्कारुकालावुकालिन्दकतकगिलोव्यप्रियालपुष्करवीजकाश्मर्यमधूकद्राक्षाखर्जूरराजादनतालनालिकेरेक्षुविकारवलातिबलात्मगुप्ता विदारी पयस्यागोक्षुरकक्षीरमोरटमधूलिकाकूष्माण्डप्रभृतीनि समासेन मधुरो वर्गः । (S.S.Su 42/11)

घृत हेम गुडाक्षोडमोचचोचपरूपकम् । अभीरुवीरा पनस राजादनबलात्रयम् ॥
मेदे चतस्रः पर्णिन्योजीवन्ती जीवक ऋषभौ । मधूकं मधुकं विम्बी विदारी श्रावणीयुगम् ॥
क्षीर शुक्ला तुगाक्षीरी क्षीरिण्यौ काश्मरी सहे । क्षीरेक्षुगोक्षुरक्षौद्रद्राक्षादिः मधुरो गणः ॥ (A.H.Su 10/22-25)

Charaka Samhita	Sushruta Samhita	Ashtanga Hridaya
Jeevaka, Rishabhaka, Jeevanti, Veera, Tamalaki (Bhumyamalaki), Kakoli, KshiraKakoli, Mudgaparni, Mashaparni, Shalaparni, Prishniparni, Asanaparni, Madhuparni, Meda, Mahameda, Karkatashringi, Shringatika, Chinnaruha (Guduchi), Chatra, Atichatra, Shravani (Mundi), Mahashravani, Sahadeva, Vishwadeva, Shukla (Sharkara), Kshira Shukla (Kushmanda), Bala, Atibala, Kshira Vidari, Kshudrasaha, Mahasaha, Rishyagandha, Ashwagandha, Vrishcheera, Punarnava, Brihati, Kantakari, Urubaka (Eranda), Morata (Murva), Shwadamshtra (Gokshura), Samharsha, Shatavari, Shatapushpa, Madhukapushpi, Yashtimadhu, Madhulika, Mridweeka, Kharjura, Parushaka, Atmagupta (Kapikacchu), Pushkara Beeja, Kasheruka, Raja Kasheruka, Rajadana, Kataka, Kashmarya, Sheetapaki (Gunja), Odana Paki, Tala, Kharjura, Mastaka, Ikshu, Ikshuvalika, Darbha, Kusha, Kasha, Shali, Gundretkata, Sharamula, Raja Kshavaka, Rishyaprokta, Dwarada, Bharadwaji, Vanatrapusi, Abheeru, Hamsapadi, Kaka Nasika, Kulingakshi, Ksheeravalli, Madhuvalli.	Kakoli, Kshira, Ghrita, Vasa, Majja, Shali, Shashtika Shali, Yava, Godhuma, Masha, Shringataka, Kasheruka, Trapusa, Ervaruka, Arka, Urubaka, Alabu, Kalindi, Kataka, Giloy, Priyala, Pushkara Beeja, Kashmarya, Madhuka, Draksha, Kharjura, Rajadana, Tala, Nalikera, Ikshu-Vikara, Bala, Atibala, Atmagupta, Vidari, Payasya, Gokshura, Kshira Morata, Madhulika, Kushmanda.	Ghrita, Hema, Guda, Kshoda, Mocha, Chocha, Parushaka, Abheeru, Veera, Panasa, Rajadana, Bala Traya, Meda, 4 Types Of Parni (Shalaparni, Prishniparni, Mudgaparni, Mashaparni), Jeevanti, Jeevaka, Rishabhaka, Madhuka, Madhuka, Bimbi, Vidari, Shravani Yugma, Ksheera Shukla, Tugakshiri, Ksirini, Kashmarya, Kshira, Ikshu, Gokshura, Kshoudra, Draksha

b. Amla Skandha

आम्राम्रातकलकुचकरमर्दवृक्षाम्लाम्लवेतसकुवलबदरदाडिममातुलुङ्गगण्डीरामलकनन्दीतकशीतकतिन्तिडीकदन्तशठैरावतककोशाम्रधन्वनानां फलानि, पत्राणि चाम्रातकाश्मन्तकचाङ्गेरीणां चतुर्विधानां चाम्लिकानां द्वयोश्च कोलयोश्चामशुष्कयोर्द्वयोश्चैव शुष्काम्लिकयोर्ग्राम्यारण्ययोः, आसवद्रव्याणि च सुरासौवीरकतुषोदकमैरेयमेदक मदिरामधुशुक्तशीधुदधि दधिमण्डोदश्विद्धान्याम्लादीनि च । (C.S.Vi 8/139)

दाडिमामलकमातुलुङ्गाम्रातककपित्थकरमर्दबदरकोलप्राचीनामलकतिन्तिडीककोशाम्रकभव्यपारावत - वेत्रफललकुचाम्लवेतसदन्तशठदधितक्रसुराशुक्तसौवीरतुषोदकधान्याम्लप्रभृतीनि समासेनाम्लो वर्गः ।

(S.S.Su 42/11)

अम्लो धात्रीफलाम्लीकामातुलुङ्गाम्लवेतसम् । दाडिमं रजतं तक्रं चुक्रं पालेवतं दधि॥

आम्रमाम्रातकं भव्यं कपित्थं करमर्दकम्। (A.H.Su10/25-26)

Charaka Samhita	Sushruta Samhita	Ashtanga Hridaya
Amra, Amrataka, Lakucha, Karamada, Vrikshamla, Amlavetasa, Kuvala, Badara, Dadima, Matulunga, Gandeera, Amalaka, Nanditaka, Sheetaka, Tintideeka, Dantashta, Eravata, Koshamra, Dhanvana, Ashmantaka, Changeri, Kola, Asava, Sura, Souveera, Tushodaka, Maireya, Medaka, Madira, Madhu, Shukta, Sheedhu, Dadhi Manda, Udashwita, Dhanyamla	Dadima, Amalaki, Matulunga, Amrataka, Kapitha, Karamarda, Badara, Kola, Prachinamalaka, Tintideeka, Koshamra, Bhavya, Paravata, Vetraphala, Lakucha, Amlavetasa, Dantashata, Dadhi, Takra, Sura, Shukta, Souveera, Tushodaka, Dhanyamla	Dhatriphala, Amlika, Matulunga, Amlavetasa, Dadima, Rajata (Siver), Takra, Chukra, Palevata, Dadhi, Amra, Amrataka, Bhavya, Kapittha, Karamardaka

c. Lavana Skandha

सैन्धवसौवर्चलकालविडपाक्यानूपकूप्यवालुकैलमौलकसामुद्ररोमकौद्भिदौषरपाटेयकपांशुजान्येवंप्रकाराणि चान्यानि लवणवर्गपरिसंख्यातानि । (C.S.Vi 8/139)

सैन्धवसौवर्चलविडपाक्यरोमकसामुद्रकपक्तिमयवक्षारोपरप्रसूतसुवर्चिकाप्रभृतीनि समासेन लवणो वर्गः । (S.S.Su 42/11)

वरं सौवर्चलं कृष्णं विडं सामुद्रमौद्भिदम् । रोमकं पांसुजं शीसं क्षारश्च लवणो गणः॥ (A.H.Su.10/27)

Charaka Samhita	Sushruta Samhita	Ashtanga Hridaya
Saindhava, Souvarchala, Kala, Vida, Pakya, Anupa, Kupya, Valuka, Maulaka, Samudra, Romaka, Oudbhida, Oushara, Pateyaka, Pamshunya	Saindhava, Souvarchala, Vida, Pakya, Romaka, Samudra, Paktrima, Yavakshara, Ushara, Suvarchika.	Varam (Saindhava), Sauvarcala, Krishna, Bida Salt, Samudra, Audbhida, Romaka, Pamshuja, Seesa And Kshara.

d. Katu Skandha

पिप्पलीपिप्पलीमूलहस्तिपिप्पलीचव्यचित्रकशृङ्गवेरमरिचाजमोदार्द्रकविडङ्गकुस्तुम्बुरुपीलुतेजोवत्येलाकुष्ठभल्लातकास्थिहिङ्गुनिर्यासकिलिममूलकसर्षपलशुनकरञ्जशिग्रुकमधुशिग्रुकखरपुष्पभूस्तृणसुमुखसुरसकुठेरकार्जकगण्डीरकालमालकपर्णासक्षवकफणिज्झक क्षारमूत्रपित्तानीति । (Ca.S.Vi 8/139)

पिप्पल्यादिः सुरसादिःशिग्रुमधुशिग्रुमूलकलशुनसुमुखशीतशिवकुष्ठदेवदारुहरेणुकावल्गुजफलचण्डागुग्गुलुमुस्तलाङ्गलकीशुकनासापीलुप्रभृतीनि सालसरादिश्च प्रायशः कटुको वर्गः । (Su.S.Su 42/11)

कटुको हिङ्गु मरिचकृमिजित् पञ्चकोलकम् । कुठेराध्या हरितकाः पित्तं मूत्रमरुष्करम्॥ (A.H.Su 10/30-31)

Charaka Samhita	Sushruta Samhita	Ashtanga Hridaya
Pippali, Pippalimula, Hasti Pippali, Chavya, Chitraka, Shringavera, Marica, Ajamoda, Ardraka, Vidanga, Kustumburu, Peelu, Tejovati, Ela, Kushta, Bhallatakasthi, Hingu Niryasa, Kilima, Mulaka, Sarshapa, Lashuna, Karanja, Shigru, Kharapushpa, Bhustruna, Sumukha, Surasa, Kuteraka, Arjaka, Gandeera, Kalamala, Kshavaka, Phaninjaka, Kshara, Muta, Pitta	Pippalyadi Gana, Surasadi Gana, Shigru, Madhu Shigru, Mulaka, Lashuna, Sumukha, Sheetashiva, Kushta, Devadaru, Harenuka, Avalguja, Chanda, Guggulu, Musta, Langalaki, Shukanasa, Peelu, SalasaradiGana.	Hingu, Maricha, Krimijit (Vidanga), Panchakola (Chitraka, Pippalmoola, Pippali, Chitraka And Shunti), Leafy Vegetables Such As Kutheraka Etc, Pitta (Bile Of Animals), Mutra, Arushkara Etc.

e. Tikta Skandha

चन्दननलदकृतमालनक्तमालनिम्वतुम्बुरुकुटजहरिद्रादारुहरिद्रामुस्तामूर्वाकिराततिक्तककटुकरोहिणीत्रायमाणाकारवेल्लिकाकरीरकरवीरकेवुककठिल्लकवृपमण्डूकपर्णीकार्कोटकवार्ताककर्कशकाकमाचीकाकोदुमवरिकासुपव्य तिविपापटोलकुलकपाठागुडूचीवेत्राग्रवेतसविकङ्कतवकुलसोमवल्कसप्तपर्णसुमनार्ककावल्गुजवचातगरागुरुवालकोशीराणीति । (C.S.Vi 8/139)

आरग्वधादिगुडूच्यादिर्मण्डूकपर्णीवित्रकरीहरिद्राद्वयेन्द्रयववरुणास्वादुकण्टकसप्तपर्णबृहतीद्वयशङ्खिनीद्रवन्तीत्रिवृत्कृतवेधनकर्कोटककारवेल्लवार्ताक करीरकरवीरसुमनः शङ्खपुष्प्यपामार्गत्रायमाणाशोकरोहिणीवैजयन्तीसुवर्चला पुनर्नवावृश्चिकालीज्योतिष्मती प्रभृतीनि समासेन तिक्तो वर्गः । (S.S.Su 42/11)

तिक्तः पदोली त्रायन्ती वालकोशीर चन्दनम् । भूनिम्वनिम्व कटुका तगरा गुरुवत्सकम्॥
नक्तमाला द्विरजनी मुस्त मूर्वाटरूपकम् । पाठापामार्गकांस्यायोगुडूचिधन्वयासकम्॥
पञ्चमूलं महाद्याघ्रयौ विशालऽऽतिविपावचा। (A.H.Su 10/28-30)

Charaka Samhita	Sushruta Samhita	Ashtanga Hridaya
Chandana, Nalada, Kritamala, Naktamala, Nimba, Tumburu, Kutaja, Haridra, Daruharidra, Musta, Murva, Kiratatikta, Katukarohini, Trayamana, Karavellika, Kareera, Karaveera, Kebuka, Katillaka, Vrisha, Mandukaparni, Karkotaka, Vartaka, Karkasha, Kakamachi, Kakodumbara, Sushavya, Ativisha, Patola, Kulaka, Patha, Guduchi, Vetragra, Vetasa, Vikankata, Bakula, Somavalka, Saptaparna, Sumana, Arka, Avalguja, Vacha, Tagara, Agaru, Valaka, Usheera	Aragwadhadi Gana, Guduchyadi Gana, Mandukaparni, Vetra, Kareera, Haridra, Daruharidra, Indrayava, Varuna, Swadukantaka, Saptaparna, Brihati, Kantakari, Shankhini, Dravanti, Trivrit, Kritavedhana, Karkotaka, Karavellaka, Vartaka, Kareera, Karaveera, Sumana, Shankapushpi, Apamarga, Trayamana, Ashoka, Rohini, Vaijayanti, Suvarchala, Punarnava, Vrichikali, Jyotishmati	Patoli, Trayanti, Valaka, Usira, Chandana, Bhunimba, Nimba, Katuka, Tagara, Aguru,Vatsaka, Naktamala, Haridra, Daru Haridra, Musta, Murva, Atarushaka, Patha, Apamarga, Kamsya, Ayas (Iron), Guduchi, Dhanvayasaka, Mahat Pancamula (Bilva, Agnimantha, Shyonaka, Gambhari, Patala)Vyaghrou (Brihati And Kantakari), Vishala, Ativisha,Vacha

f. Kashaya Skandha

प्रियङ्ग्वनन्ताम्रास्थ्यम्वष्ठकीकट्वङ्गलोध्रमोचरससमङ्गाधातकीपुष्पपद्मापद्मकेशरजम्ब्वाम्रप्लक्षवटकपीतनोदुम्वराश्वत्थभल्लातकास्थ्यश्मन्तकशिरीपशिंशपासोमवल्कतिन्दकप्रियालवदरखदिरसप्तपर्णाश्वकर्णस्यन्दनार्जुनारिमेदैलवालुकपरिपेलवकदम्वशल्लकीजिङ्गिनीकाशकशेरुकराजकशेरुककट्फलवंशपद्मकाशोकशालधवसर्जभूर्जशणखरपुष्पापुरशमीमाचीकवरकतुङ्गाजकर्णस्फूर्जकविभीतककुम्भीपुष्करवीजविसमृणालतालखर्जूरतरुणानीति । (C.S.Vi 8/139)

न्यग्रोधादिअम्वष्ठादिप्रियङ्ग्वादिरोध्रादिस्त्रिफलाशल्लकीजम्ववाम्रवकुलतिन्दकफलातिकतकशाकफल-पाषाणभेदकवनस्पतिफलानि सालसरादिश्च प्रायशः कुरुवककोविदार जीवन्ती चिल्लीपालाङ्क्यायासुनिषण्णक प्रभृतीनि वरकादयो मुद्गादयश्च समासेन कषायश्च । (S.S.Su 42/11)

वर्गःकषायः पथ्याक्षं शिरीषः खदिरो मधु । कदम्वोदुम्वरं मुक्ताप्रवालाञ्जनगैरिकम्॥
बालं कपित्थं खर्जूरंबिसपद्मोत्पलादि च । (A.H.Su 10/31-32)

Charaka Samhita	Sushruta Samhita	Ashtanga Hridaya
Priyangu, Ananta, Amrasthi, Ambashtaki, Katvanga, Lodhra, Mocharasa, Samanga, Dhatakipushpa, Padma, Padmakeshara, Jambu, Amra, Plaksha, Vata, Kapeetana, Udumbara, Ashwattha, Bhallatakasthi, Ashmantaka, Shirisha, Shimshapa, Somavalka, Tinduka, Priyala, Badara, Khadira, Saptaparna, Ashwakarna, Syandana, Arjuna, Arimeda, Elavaluka, Paripelava, Kadamba, Shallaki, Jingini, Kasha, Kasheruka, Raja Kasheruka, Katphala, Vamsha, Padmaka, Ashoka, Shala, Dhava, Sarja, Bhurja, Shana, Kharapushpa, Shami, Macheeka, Ajakarna, Sphurjaka, Vibhitaki, Kumbheeka, PushkaraBeeja, Bisa, Mrunala, Tala, Kharjura, Taruna	Nyagrodhadi Gana, Ambashtadi Gana, Priyangwadi Gana, Rodhradi Gana, Triphala, Shallaki Jambu, Amra, Bakula, Tinduka, Kataka, Shaka, Pashana Bheda, Salasaradig Ana, Kovidara, Jeevanti, Palakya, Sunishannaka	Pathya, Aksha, Shirisha, Khadira, Madhu, Kadamba, Udumbara, Mukta (Pearls), Pravala, Anjana, Gairika (Purified Red Ochre),Bala Kapittha, Kharjura, Bisa, Padma, Utpala Etc.

G. Classification of Dravyas according to their Karma bheda (Pharmacological action):

Based on the Karma or the pharmacological actions, the Dravyas are classified into many groups (Karmatmakavargeekarana) by different Acharyas. The selection of the Dravya is done based on the Guna-Karma Siddhanta. These are the unique combinations of drugs which exhibit similar actions; hence they are placed together. It is evident that Acharyas have classified drugs based on their morphological characters as well as pharmacological activity. These combinations of drugs are very effective in treatment.

समस्तम् वर्गमर्धं वा यथालाभमथापि वा । प्रयुञ्जीत भिषक् प्राज्ञो यथोद्दिष्टेषु कर्मसु ॥ (S.S.Su 37/33)

Sushruta mentioned that, the wise physician should use the entire group or its half or whatever drugs are available. If all are not available, drugs can be used depending on the availability.

समीक्ष्य दोषभेदांश्च भिन्नत् मिश्रान् प्रयोजयेत् । पृथङ् मिश्रान् समस्तान्वा गणं वा व्यस्तसंहतम् ॥

(S.S.Su 38/82)

Considering the condition of Doshas, the Dravyas can be used either separately

or mixed (combinations of 2 or more groups) or the group can be divided or the whole group can be used.

1. Charakokta Panchashat Mahakashaya:

The concepts of 50 Mahakashayas mentioned by Charaka in the 4th chapter of sutra sthana (Shadvirechanashatashriteeya Adhyaya), wherein he has grouped 500 drugs into 50 Mahakashayas. Each group consisting 10 drugs having similar Guna-Karma (pharmacological actions). The 50 Mahakashayas will be detailed in the 10th chapter of this text.

2. Sushrutokta Gana:

In Sushruta Samhita, the Dravyas are grouped in 37 Ganas. Naming of the Ganas were done based on the first drug of the particular group or morphology or part used for the treatment. The number of drugs is not fixed as in Charakokta Mahakashayas.

1. विदारिगन्धादि गण

विदारिगन्धाविदारीविश्वदेवासहदेवाश्वदंष्ट्रापृथक्पर्णीशतावरीसारिवाकृष्णसारिवाजीवकर्षभकौमहासहाक्षुद्रसहावृहत्यौपुनर्नवैरण्डोहंसपादीवृश्चिकाली ऋषभी चेति ।

विधारिगन्धादिरियं गणः पित्तानिलापहः । शोषगुल्माङ्गमर्दोर्ध्वश्वासकासविनाशनः ॥ (S.S.Su 38/4-5)

1. Vidarigandha– *Desmodium gangeticum* DC.
2. Vidari– *Pureria tuberosa* DC.
3. Vishwadeva– *Grewia hirsuta* Vahl.
4. Sahadevi– *Vernonia cinerea* (L.) Less.
5. Swadasmshtra– *Tribulus terrestris* Linn.
6. Prithakparni– *Uraria picta* Devs.
7. Shatavari– *Asparagus racemosus* Willd.
8. Sariva– *Hemidesmus indicus* R. Br.
9. Krishna sariva– *Ichnocarpus frutescens* R. Br.
10. Jeevaka– *Microstylis wallichii* Linn.
11. Rishabhaka– *Microstylis mucifera* (Lindl.) Ridl.
12. Mahasaha/Mashaparni– *Teramnus labialis* Linn.
13. Kshudrasaha/Mudgaparni– *Vigna trilobata*(L.) Verdc.
14. Brihati– *Solanum indicum* Linn.
15. Kantakari– *Solanum xanthocarpum* Schrad.
16. Punarnava– *Boerhavia diffusa* L.nom. cons.

17. Eranda- *Ricinus communis* L.
18. Hamsapadi- *Adianthum lunulatum* L.
19. Vrishchikali- *Pergularia extensa* (Jacq.) N.E.Br.
20. Rishabhi/Kapikacchu- *Mucuna pruriens* (L.) DC.

There are 20 drugs mentioned in this group.

Doshaghna Karma: Pitta-Vatahara

Rogaghna Karma: Shosha, Gulma, Angamarda, Urdhwashwasa & Kasa.

2. आरग्वधादि गण

आरग्वधमदनगोपघोण्टाकण्टकीकुटजपाठापाटलामूर्वेन्द्रयवसप्तपर्णनिम्बकुरुण्टकदासीकुरुण्टकगुडूचीचित्रकशार्ङ्गेष्टाकरञ्जद्वयपटोलकिराततिक्तानि सुषवी चेति ।

आरग्वधादिरित्येष गणः श्लेष्मविषापहः । मेहकुष्ठज्वरवमीकण्डूघ्नो व्रणशोधनः ॥ (S.S.Su 38/6-7)

1. Aragwadha- *Cassia fistula* L.
2. Madana- *Randia dumetorum* (Retz.) Poir.
3. Gopaghonta- *Momordica charantia* L.
4. Kantaki/Vikankata- *Flacourtia indica* (Burm.f.) Merr.
5. Kutaja- *Holarrhena antidysenterica* Wall.
6. Patha- *Cissampelo spereira* L.
7. Patala- *Stereospermum suaveolens* DC.
8. Murva- *Marsedenia tenacissima* (Roxb.)
9. Indrayava/Kutajabeeja- *Seeds of Holarrhena antidysenterica* Wall.
10. Saptaparna- *Alstonia scholaris* (L.) R.Br.
11. Nimba- *Azadirachta indica* A.Juss.
12. Kuruntaka/Saireyaka- *Barleria prionitis* L.
13. Dasikuruntaka- *Barleria strigosa* Willd.
14. Guduchi- *Tinospora cordifolia* (Thunb.) Miers.
15. Chitraka- *Plumbago zeylanica* L.
16. Sharngeshta- *Physalis minima* L.

Karanjadwaya- Karanja & Kantaki Karanja

17. Karanja- *Pongamia pinnata* (L.) Pierre.
18. Kantakikaranja- *Caesalipinia cristaauct*. Amer.
19. Patola- *Trichosanthes dioica* Roxb.

20. Kiratatikta- *Swertia chirata* (Roxb.ex.Flem.) Karsten.
21. Sushavi – *Calycopteris floribunda* (Roxb.) Lam. Ex Poir.

There are 21 drugs mentioned in this group.

Doshaghna Karma: Shleshmahara

Bheshaja Karma: Visha, Vranashodhana

Rogaghna Karma: Meha, Kushta, Jwara, Vami, Kandu

3. सालसरादि गण

सालसराजकर्णखदिरकदरकालस्कन्धक्रमुकभूर्जमेषशृङ्गतिनिशचन्दनकुचन्दनशिंशिपाशिरीषासनधवार्जुनतालशाकनक्तमालपूतीकाश्वकर्णागुरुणीकालीयकं चेति ।

सालसरादिरित्येष गणः कुष्ठविनाशनः । मेहपाण्डुवामयहरः कफमेदोविशोषणः ॥ (S.S.Su 38/8-9)

1. Salasara- *Resin of Shorearobusta* Roth.
2. Ajakarna- *Vateria indica* L.
3. Khadira- *Acacia catechu* (L.) Willd. Oliv.
4. Kadara- *Acacia suma* (Roxb.) Voigt.
5. Kalaskandha- *Diospyros peregrina* (Gaertn.) Gurke.
6. Kramuka- *Areca catechu* L.
7. Bhurja- *Betula utilis* D. Don.
8. Meshashringa- *Gymnema sylvestre* R. Br.
9. Tinisha- *Ougenia dalbergioides* Benth.
10. Chandana- *Santalum album* L.
11. Kuchandana- *Pterocarpus santalinus* L.f.
12. Shimshipa- *Dalbergia sissoo* Roxb.
13. Shireesha- *Albizzia lebbeck* (L.) Benth.
14. Asana- *Pterocarpus marsupium* Roxburgh
15. Dhava- *Anogeissus latifolia* (Roxb. Ex DC) Wall. Ex Guill. &Perr.
16. Arjuna- *Terminalia arjuna* Roxb.
17. Tala- *Borassus flabellifer* L.
18. Shaka- *Tectona grandis* L.f.
19. Naktamala/Karanja- *Pongamia pinnata* (L.) Pierre.
20. Putika- *Holoptelia integrifolia* (Roxb.) Planch.
21. Ashwakarna- *Dipterocarpus alatus* Roxb. Ex G.Don

22. Aguru- *Aquillaria agallocha* Roxb.
23. Kaleeyaka- *Coscinium fenestratum* (Goetgh.) Colebr

There are 23 drugs mentioned in this group.

Doshaghna Karma: Kaphahara

Bheshaja Karma: Medo, Vishoshana

Rogaghna Karma: Kushta, Meha, Pandu

4. वरुणादि गण

वरुणार्तगलशिग्रुमधुशिग्रुतर्करीमेषशृङ्गीपूतीकनक्तमालमोरटाग्निमन्थसैरेयकद्वयविम्बी वसुकवसिरचित्रकशतावरीविल्वाजशृङ्गीदर्भावृहतीद्वयं चेति ।

वरुणादिर्गणो ह्येष कफमेदोनिवारणः। विनिहन्ति शिरः शूलगुल्माभ्यन्तरविद्रधीन् ॥ (S.S.Su 38/10-11)

1. Varuna- *Crateava nurvala* Buch. Ham.
2. Artagala- *Barleriaprionitis* L.
3. Shigru- *Moringa oleifera* Lam.
4. Madhu shigru- *Moringa concanensis* L.
5. Tarkari- *Clerodendron phlomidis* L.f.
6. Meshshringi- *Gymnema sylvestre* R.Br.
7. Putika- *Holoptelia integrifolia* (Roxb.) Planch.
8. Naktamala/Karanja- *Pongamia pinnata* (L.) Pierre.
9. Morata/Murva- *Marsdenia tinacissima* (Roxb.)
10. Agnimantha – *Premna integrifolia*L.
    Saireyakadwaya- Raktapushpa & Raktapushpa
11. Saireyaka (Raktapushpa)- *Barleria cristata* L.
12. Saireyaka (Neelapushpa)- *Barleria strigosa* Willd.
13. Bimbi- *Coccinia grandis* (L.) Voigt
14. Vasuka- *Spermacoce hispida* L.
15. Vashira/Apamarga- *Achyranthes aspera* L.
16. Chitraka- *Plumbago zeylanica* L.
17. Shatavari- *Asparagus racemosus* Willd.
18. Bilva- *Aegle marmelos* (L.) Correa.
19. Ajashringi- *Pistacia integerrima* J.L.Stewart ex Brandis.

20. Darbha- *Desmostachya bipinnata* (L.) Stapf.
    Brihatidwaya- Brihati & Kantakari
21. Brihati- *Solanum indicum* Roxb.
22. Kantakari- *Solanum xanthocarpum* Schrad.

There are 22 drugs mentioned in this group.

Doshaghna Karma: Kaphahara

Rogaghna Karma: Shirashula, Gulma, Abhyantaravidradhi

5. वीरतर्वादि गण

वीरतरुसहचरद्वयदर्भवृक्षादनीगुन्द्रानलकुशकाशाश्मभेदकाग्निमन्थमोरटावसुकवसिरभल्लूककुरण्टिकेन्दीवरकपोतवङ्का श्वदंष्ट्रा चेति ।

वीरतर्वादिरित्येष गणो वातविकारनुत् । अश्मरीशर्करामूत्रकृच्छ्राघातरुजापहः ॥ (Su.S.Su 38/12-13)

1. Veerataru- *Dichrostachys cineraria* Wight et Arn.
2. Sahachara (Raktapushpa)- *Barleria cristata* L.
3. Saireyaka (Neelapushpa)- *Barleria strigosa* Willd.
4. Darbha- *Desmostachya sbipinnata* (L.) Stapf
5. Vrikshadani- *Loranthus longiflorus* Desr.
6. Gundra- *Typha elephantina* Roxb.
7. Nala- *Arundo donax*L.
8. Kusha- *Desmostachys bipinnata* (L.) Stapf
9. Kasha- *Saccharum spontaneum* L.
10. Ashmabheda- *Berginia ligulata* (Wall.) Engl.
11. Agnimantha- *Premna integrifolia* L.
12. Morata/Murva- *Marsdenia tinacissima* (Roxb.) Wight et Arn.
13. Vasuka- *Spermacoce hispida* L.
14. Vasira- *Achyranthes aspera* L.
15. Bhalluka- *Oroxylum indicum* (L.) Benth. Ex Kurz
16. Kurantika- *Barleria prionitis* L.
17. Indivara- *Nelumbo nucifera* Gaertn.
18. Kapotavanka/Brahmi- *Bacopa monnieri* (L.) Pennell
19. Shwadamshtra/Gokshura- *Tribulus terrestris* L.

There are 19 drugs mentioned in this group.

Doshaghna Karma: Vatahara

Rogaghna Karma: Ashmari, Sharkara, Mutrakricchra, Mutraghata, Ruja

6. लोध्रादि गण

लोध्रसावरलोध्रपलाशकुटन्नटाशोकफञ्जीकट्फलैलवालुकशल्लकीजिङ्गिनीकदम्बसाला: कदली चेति ।
राष रोध्रादिरित्युक्तो मेदःकफहरो गणः । योनिदोषहरः स्तम्भी वर्ण्यो विषविनाशनः ॥ (S.S.Su 38/14-15)

1. Lodhra- *Symplocos racemose* Roxb.
2. Sabaralodhra- *Symplocos crataegoides* Buch.-Ham. Ex D. Don) Kuntze
3. Palasha- *Butea monosperma* (Linn.) Kuntze
4. Kutannata- *Oroxylum indicum* Vent.
5. Ashoka- *Saracaasoka* Roxb. De Wilde
6. Phanji- *Clerodendron serratum* (Linn.) Moon
7. Katphala- *Myrica esculenta* Buch-Ham
8. Elavaluka- *Prunus cerasus* Linn.
9. Shallaki- *Boswellia serrata* Roxb.
10. Jingini- *Lannea coromandelica* (Houtt.) Merr.
11. Kadamba- *Anthocephalus cadamba* (Roxb.) Miq.
12. Sala- *Vateria indica* Linn.
13. Kadali- *Musa paradisica* L.

There are 13 drugs mentioned in this group.

Doshaghnakarma: Kaphahara

Bheshajakarma: Medahara, Stambhana, Varnya

Roghaghnakarma: Yonidosha, Visha

7. अर्कादि गण

अर्कालर्ककरञ्जद्वयनागदन्तीमयूरकभार्ङ्गीरास्नेन्द्रपुष्पीक्षुद्रश्वेतामहाश्वेतावृश्चिकाल्यलवणास्तापसविक्षश्चेति ।
अर्कादिको गणो ह्येष कफमेदोविषापहः । कृमिकुष्ठप्रशमनो विशेषाद्व्रणशोधनः ॥ (S.S.Su 38/16-17)

1. Arka- *Calotropis procera* (Aiton) W. T Aiton
2. Alarka- *Calotropis gigantia* (L.) Dryand.
   Karanja dwaya- Karanja & Kantakikaranja
3. Karanja- *Pongamia pinnata* (L.) Pierre
4. Kantakikaranja- *Caesalpinia crista* L.

5. Nagadanti- *Croton oblongifolius* Roxb.
6. Mayuraka/Apamarga- *Achyranthes aspera* L.
7. Bharangi - *Clerodendronserratum* (L.) Moon.
8. Rasna- *Pluchea lanceolata* (DC.) C.B. Clarke
9. Indrapushpi - *Gloriosa superba* L.
10. Kshudra Shweta-*Albizia procera* (Roxb.) Benth.
11. Mahashweta/Shweta Aparajita- *Albizia lucida* (Jacques) Benth.
12. Vrishchikali- *Pergularia extensa* (Jacq.) N.E.Br.
13. Alavana/Jyotishmati- *Celastru spaniculatus* Willd.
14. Tapasavriksha/Ingudi- *Balanites roxburghii* Planch.

There are 14 drugs mentioned in this group.

Doshaghna Karma: Kaphahara

Bheshaja Karma: Medohara, Vishahara, Vranashodhana

Rogaghna Karma: Krimi, Kushta

8. सुरसादि गण

सुरसाश्वेतसुरसाफणिज्झकार्जकभूस्तृणसुगन्धकसुमुखकालमालकुठेरककासमर्दक्षवककखरपुष्पाविडङ्गक
ट्फलसुरसीनिर्गुण्डीकुलाहलोन्दरुकर्णिकाफञ्जीप्राचीवलकाकमाच्योविषमुष्टिकश्चेति ।
सुरसादिर्गणो ह्येष कफहृत् कृमिसूदनः । प्रतिश्यायारुचिश्वासकासघ्नो व्रणशोधनः ॥ (S.S.Su 38/18-19)

1. Surasa- *Ocimum sanctum* L.
2. Shweta surasa- *Ocimum sanctum* L.
3. Phaninjaka- *Origanum majorana* Linn.
4. Arjaka- *Orthosiphon pallidus* Royle.
5. Bhustruna- *Cymbopogon citratus* (DC.) Stapf
6. Sugandhaka/Dronapushpi- *Leucus aspera* (Willd.) Link.
7. Sumukha/Rajika- *Brassica juncea* (L.) Czern.
8. Kalamala- *Ocimum basilicum* L.
9. Kutheraka/Barbari- *Ocimum basilicum* L.
10. Kasamarda- *Cassia occidentalis* (L.) Link
11. Kshavaka- *Centipeda minima* Linn.
12. Kharapushpa- *Ocimum species*
13. Vidanga- *Embeliaribes* Burm.f.

14. Katphala – *Myrica esculenta* Buch.-Ham. Ex D. Don
15. Surasi/Shweta Nirgundi– *Vitex negundo* L.
16. Nirgundi/NeelaNirgundi- *Vitex negundo* L.
17. Kulahala – *Spaeranthes indicus* Linn.
18. Kundurukarnika – *Ipomea renifromis* Chois.
19. Phanji – *Clerodendronserratum*(L.) Moon.
20. Prachibala/Kakajangha – *Peristrophe bicalyculata* (Retz.) Nees
21. Kakamachi – *Solanum nigrum* L.
22. Vishamushtika – *Strychnosnux-vomica* L.

There are 22 drugs mentioned in this group.

Doshaghna Karma: Kaphahara

Bheshaja Karma: Krimisoddana, Vranashodhana

Rogaghna Karma: Pratishyaya, Aruchi, Shwasa, Kasa

9. मुष्ककादि गण

मुष्ककपलाशधवचित्रकमदनवृक्षकशिंशिपावज्रवृक्षस्त्रिफला चेति ।

मुष्ककादिर्गणां ह्येष मेदोघ्नशुक्रदोषहृत् । मेहार्शःपाण्डुरोगघ्नः शर्करानाशनः परः ॥ (S.S.Su 38/21-21)

1. Mushkaka/Patala– *Stereospermum suaveolens* DC.
2. Palasha– *Butea monosperma* (Linn.) Kuntze
3. Dhava– *Anogeissus latifolia* Wall.
4. Chitraka– *Plumbago zeylanica* Linn.
5. Madana – *Randia dumetorum* (Retz.) Poir.
6. Vrikshaka/Kutaja– *Holorrhena antidysenterica* (Linn.) Wall
7. Shishipa – *Dalbergia sissoo* Roxb.
8. Vajra vriksha– *Euphorbia nerifolia* Linn.
9. Haritaki– *Terminalia chebula* Retz.
10. Amalaki – *Emblica officinalis* Gaertn.
11. Vibhitaki– *Terminalia bellerica* Roxb.

There are 11 drugs mentioned in this group.

Bheshaja Karma: Medoghna, Shukradoshahrit

Rogaghna Karma: Meha, Arsha, Pandu, Sharkara

10. पिप्पल्यादि गण

पिप्पलीपिप्पलीमूलचव्यचित्रकशृङ्गवेरमरिचहस्तिपिप्पलीहरेणुकैलाजमोदेन्द्रयवपाठाजीरकसर्षपमहानिम्बफलहिङ्गुभार्ङ्गीमधुरसाऽतिविषावचाविडङ्गानि कटुरोहिणी चेति ।

पिप्पल्यादिः कफहरः प्रतिश्यायानिलारुचीः । निहन्याद्दीपनो गुल्मशूलघ्नश्चामपाचनः ॥ (S.S.Su 38/4-5)

1. Pippali– *Piper longum* Linn.
2. Pippalimula– Root of *Piper longum* Linn.
3. Chavya– *Piper chaba* Hunter
4. Chitraka– *Plumbago zeylanica* Linn.
5. Shringavera– *Zingiber offinale* Roxb.
6. Maricha– *Piper nigrum* Linn.
7. Hastipippali– *Scindapsus officinalis* (Roxb.) Schott.
8. Harenuka– *Seeds of Vitex negundo* Linn.
9. Ela– *Elattaria cardamomum* Maton.
10. Ajamoda– *Apium graveolens* L.
11. Indrayava/Kutajabeeja– *Seeds of Holorrhena anidysenterica* (Linn.) Wall.
12. Patha– *Cissampelos pareira* Linn.
13. Jeeraka– *Cuminum cymium* Linn.
14. Sarshapa– *Brassica compestris* Linn.
15. Mahanimbaphala– *Fruit of Melia azadirachta* Linn.
16. Hingu– *Ferula narthex* Boiss
17. Bharangi– *Clerodendron serratum* (Linn.) Moon.
18. Madhurasa/Murva– *Marsedenia tenacissima* (Roxb.)
19. Ativisha– *Aconitum heterophyllum* Wall. ex Royle
20. Vacha– *Acorus calamus*L.
21. Vidanga– *Embeliaribes* Burm.
22. Katurohini– *Picrorrhiza kurroa* Royle. ex Benth.

There are 22 drugs mentioned in this group.

Doshaghna Karma: Kaphahara

Bheshaja Karma: Deepana, Shulaghna, Amapachana

Rogaghna Karma: Pratishyaya, Aruchi, Gulma

11. एलादि गण

एलातगरकुष्ठमांसीध्यामकत्वक्पत्रनागपुष्पप्रियङ्गुहरेणुकाव्याघ्रनखशुक्तिचण्डास्थौणेयकश्रीवेष्टकचोचचोरकवालुकगुग्गुलुसर्जरसतुरुष्ककुन्दरुकागरुस्पृक्कोशीरभद्रदारुकुङ्कुमानि पुन्नागकेशरं चेति ।

ऐलादिको वातकफौ निहन्याद्विषमेव च ।वर्णप्रसादनः कण्डूपिडकाकोठनाशनः ॥ (S.S.Su 38/24-25)

1. Ela- *Elettaria cardamomum* Maton.
2. Tagara- *Valeriana wallaichi* DC.
3. Kushta- *Saussurealappa* C.B. Clarke
4. Mamsi/Jatamansi- *Nardostachys jatamansi* DC.
5. Dhyamaka/Gandhatrina- *Cimbopogan citratus* (DC.) Stapf.
6. Twak- *Cinnamomum zeylanica* Breyn.
7. Patra- *Cinnamomum tamala* Nees & Eberma
8. Nagapushpa/Nagakesara- *Mesua ferrea* Linn.
9. Priyangu- *Callicarpa macrophylla* Vahl.
10. Harenuka- *Seeds of Vitex negundo* Linn.
11. Vyaghranakha- *Capparis sepiaria* Linn.
12. Shukti- *Helix aspera* (O.F Muller)
13. Chanda- *Angelia glauca* Edhew.
14. Sthouneyaka- *Taxus baccata* L.
15. Shreeveshtaka- *Pinus roxburghii* Sarg.
16. Chocha- *Cinnamomum zeylanicum* Breyn
17. Choraka- *Angelia glauca* Edgew.
18. Valuka/Elavaluka- *Prunus cerasus* Linn.
19. Guggulu- *Commiphora mukul* (Hook ex. Stocks)
20. Sarjarasa- *Vateria indica* Linn.
21. Turushka- *Liquidamber orientalis* Mill.
22. Kunduru- *Niryasa of Boswellia serrata* Roxb.
23. Sprikka- *Anisomeles malabarica* (L.) R. Br. Ex Sims.
24. Usheera- *Vetiveria zizanoides* Linn.
25. Bhadradaru/Devadaru- *Cedrus deodara* (Roxb.) Loud.
26. Kumkuma- *Crocus sativus* Linn.
27. Punnaga- *Calophyllum inophyllum* Linn.
28. Keshara - *Mesua ferrea* Linn.

There are 28 drugs mentioned in this group.

Doshaghna Karma: Vata-Kaphahara

Bheshaja Karma: Vishahara, Varnaprasadana

Rogaghna Karma: Kandu, Pidaka, Kotha

12. वचादि गण

वचामुस्तातिविषाभयाभद्रदरूणिति नागकेशरं चेति । (S.S.Su 38/26)

1. Vacha- *Acorus calamus* Linn.
2. Musta- *Cyperus rotundus* Linn.
3. Ativisha- *Aconitum heterophyllum* Wall.
4. Abhaya- *Terminalia chebula* Retz.
5. Bhadradaru- *Cedrus deodara* (Roxb.) Loud.
6. Nagakeshara- *Mesua ferrea* Linn.

There are 6 drugs mentioned in this group.

Bheshaja Karma: Stanyavishodhana, Dosha Pachana

Rogaghna Karma: Stanyadushti, Amatisara

13. हरिद्रादिगण

हरिद्रादारुहरिद्राकलशीकुटजबीजानि मधुकं चेति ।

एतौ वचाहरिद्रादि गणौ स्तन्यविशोधनौ । अमातिसारशमनौ विशेषाद्दोषपाचनौ ॥ (S.S.Su 38/27-28)

1. Haridra- *Curcuma longa* Linn.
2. Daruharidra- *Berberis aristata* DC.
3. Kalashi Prishniparni/- *Urariapicta* Desv.
4. Kutajabeeja- *Seeds of Holarrhena antidysenterica* (Linn.) Wall.
5. Madhuka- *Glycyrrhiza glabra* Linn.

There are 5 drugs mentioned in this gana.

Bheshaja Karma: Stanyavishodhana, Dosha pachana

Rogaghna Karma: Stanyadushti, Amatisara

14. श्यामादि गण

श्यामामहाश्यामात्रिवृद्दन्तीशङ्खिनीतिल्वककम्पिल्लकरम्यकक्रमुकपुत्रश्रेणीगवाक्षिराजवृक्षकरञ्जद्वयगुडूचीसप्तलाच्छगलान्त्रीसुधाः सुवर्णक्षीरी चेति ।

उक्तः श्यामादिरित्येष गणो गुल्मविषापहः । आनाहोदरविड्भेदी तथोदावर्तनाशनः ॥ (S.S.Su 38/29-30)

1. Shyama (Black)- *Operculinaturpethum* (L.) Silva Maso.
2. MahaShyama/Vidhara- *Argercia speciosa* (Linn. f) sweet
3. Trivrit (White/red)- *Operculina turpethum* (L.) Silva Maso.
4. Danti- *Baliospermum montanum* Muell.Arg.
5. Shankhini- *Euphorbia dracunculoides* Lam.
6. Tilvaka- *Symplocosracemosa* Roxb.
7. Kampillaka- *Mallotus philippinensis* Muell. Arg.
8. Ramyaka- *Melia azadirachta* Linn.
9. Kramuka- *Areca catechu* Linn.
10. Putrashreni- *Croton tiglium* Linn.
11. Gavakshi- *Citrulus colocynthis* Schard.
12. Raja vriksha- *Cassia fistula* Linn.

    Karanjadwaya- Karanja & Kantaki Karanja

13. Karanja- *Pongamia pinnata* Pierre.
14. Kantaki karanja- *Caesalpinia crista* Linn.
15. Guduchi- *Tinospora cordifolia* Willd Miers ex. Hook f. &Thoms.
16. Saptala- *Euphorbia tirucalli* Linn.
17. Chagalantri- *Argyreia nervosa* (Burm.f.) Bojer
18. Sudha- *Euphorbia nerifolia* Linn.
19. Suvarnaksheeri- *Euphorbia thamsoniana* Boiss.

There are 19 drugs mentioned in this group.

Bheshaja Karma: Vishahara

Rogaghna Karma: Gulma, Anaha, Udara, Udavarta

15. वृहत्यादि गण

वृहतीकण्टकारिकाकुटजफलपाठा मधुकं चेति ।

पाचनीयो वृहत्यादिर्गण: पित्तनिलापह: । कफारोचकहृद्रोगमूत्रकृच्छ्ररुजापह: ॥ (S.S.Su 38/31-32)

1. Brihati- *Solanum indicum* Linn.
2. Kantakari- *Solanum xanthocarpum* Schrad.
3. Kutajaphala- *Holorrhena antidysenterica* (Linn.) Wall.
4. Patha- *Cissampelos pareira* Linn.
5. Madhuka- *Glyccyrrhiza glabra* Linn.

There are 5 drugs mentioned in this group.

Doshaghna Karma: Pitta-Vatahara

Rogaghna Karma: Arochaka, Hridroga, Mutrakricchra, Ruja

16. पटोलादि गण

पटोलचन्दनकुचन्दनमूर्वागुडूचीपाठा: कटुरोहिणी चेति ।

पटोलादिर्गण: पित्तकफारोचकनाशन: । ज्वरोपशमनो व्रणश्छर्दिकण्डूविषापह: ॥ (S.S.Su 38/33-34)

1. Patola- *Tricosanthes* dioica
2. Chandana- *Santalum album* Linn.
3. Kuchandana- *Pterospermum santalinus* Linn. f.
4. Murva- *Marsedenia tenacissima* (Roxb.)
5. Guduchi- *Tinospora cordifolia* Willd Miers ex. Hook f. & Thoms.
6. Patha- *Cissampelos pareira* Linn.
7. Katurohini- *Picrorrhiza kurroa Royle* ex. Benth.

There are 7 drugs mentioned in this group.

Doshaghna Karma: Pitta-kaphahara

Bheshaja Karma: Vishahara

Rogaghna Karma: Arochaka, Jwara, Vrana, Chardi, Kandu

17. काकोल्यादि गण

काकोलीक्षीरकाकोलीजीवकर्षभकमुद्गपर्णीमाषपर्णीमेदामहामेदाच्छिन्नरुहाकर्कटशृङ्गीतुगाक्षीरीपद्मकप्र पौण्डरीक र्द्धिवृद्धिमृद्वीकाजीवन्त्यो मधुकं चेति ।

काकोल्यादिरयं पित्तशोणितानिलनाशन: । जीवनो वृंहणो वृष्य: स्तन्यश्लेष्मकरस्तथा ॥ (S.S.Su 38/35-36)

1. Kakoli- *Roscoea purpurea* Smith
2. Ksheera Kakoli- *Lilium polyphyllum* D. Don
3. Jeevaka- *Microstylis wallichii* Linn.
4. Rishabhaka- *Microstylis mucifera* (Lindl.) Ridl
5. Mudgaparni- *Phaseolus trilobata* (L.) Verds.
6. Mashaparni- *Teramnus labialis* Linn.
7. Meda- *Poligonatum verticillatum* Linn.
8. Mahameda- *Polygonum cirrhifolium* (Wall.) Royle.
9. Chinnaruha- *Tinospora cordifolia* Willd. Meirs ex. Hook f. & Thoms
10. Karkatashringi- *Pistacia integerrima* Stewart ex. Brandis

11. Tugaksheeri- *Bambusaarundinacia* Willd.
12. Padmaka- *Prunus cerasoides* D. Don.
13. Prapoundareeka- *Nelumbo nucifera* Gaertn.
14. Riddhi- *Habenaria intermedia* D. Don
15. Vriddhi- *Haberaria edgeworthi* Hook.f
16. Mridweeka- *Vitis vinifera* Linn.
17. Jeevanti- *Leptadenia reticulata* W & A
18. Madhuka- *Glyccyrrhiza glabra* Linn.

There are 18 drugs mentioned in this group.

Doshaghna Karma: Pitta-Rakta-Vatahara

Bheshaja Karma: Jeevana, Brimhana, Vrishya, Stanyakara, Kaphakara

18. ऊषकादि गण

ऊषकसैन्धवशिलाजतुकासीसद्वयहिङ्‌नि तुत्थकं चेति ।

ऊषकादिः कफं हन्ति गणो मेदोविशोषणः । अश्मरीशर्करामूत्रकृच्छ्रगुल्मप्रणाशनः ॥ (S.S.Su 38/37-38)

1. Ushaka- *Kshara mruttika*
2. Saindhava- *Rock salt*
3. Shilajatu- *Bitumen*
4. Kasisa- *Ferrous sulphate*
5. Pushpa kasisa- *Ferrous sulphate*
6. Hingu- *Ferula narthex* Boiss
7. Tuttha- *Copper sulphate*

There are 7 drugs mentioned in this group.

Doshaghna Karma: Kaphahara

Bheshaja Karma: Medovishoshana

Rogaghna Karma: Ashmari, Sharkara, Mutrakricchra, Gulma

19. सारिवादि गण

सारिवामधुकचन्दनकुचन्दनपद्मककाश्मरीफलमधूकपुष्पाण्युशीरं चेति ।

सारिवादिः पिपासघ्नो रक्तपित्तहरो गणः । पित्तज्वरप्रशमनो विशेषाद्दाहनाशनः ॥ (S.S.Su 38/39-40)

1. Sariva- *Hemidesmus indicus* R. Br.
2. Madhuka- *Glyccyrrhiza glabra* Linn.
3. Chandana- *Santalum album* Linn.

4. Kuchandana- *Pterocarpus santalinus* Linn. f.
5. Padmaka- *Prunus cerasoides* D. Don.
6. Kashmariphala- *Fruit of Gmelina* arborea Linn.
7. Madhukapushpa- *Madhuka indica*J. F Gmel
8. Usheera- *Vetiveriazizanoides* (Linn.) Nash.

There are 8 drugs mentioned in this group.

Doshaghna Karma: Pittahara

Bheshaja Karma: Pipasaghna

Rogaghna Karma: Raktapitta, Pittajajwara, Dahanashana

20. अञ्जनादि गण

अञ्जनरसाञ्जननागपुष्पप्रियङ्‌गुनीलोत्पलनलदनलिनकेशराणि मधुकं चेति ।

अञ्जनादिर्गणो ह्येष रक्तपित्तनिबर्हणः । विषोपशमनो दाहं निहन्त्याभ्यन्तरं भृशम् ॥ (S.S.Su 38/41-42)

1. Anjana- *Collyrium*
2. Rasanjana- Collyrium prepared from *Baerberisaristata* DC.
3. Nagapushpa- *Mesua ferrea* Linn.
4. Priyangu- *Calicarpa macrophylla* Vahl.
5. Neelotpala- *Nymphaea stellata*
6. Nalada- *Nardostachysjatamansi* DC.
7. Nalina Keshara- *Nelumbo nucifera* Gaertn.
8. Madhuka- *Glyccyrrhiza glabra* Linn.

There are 9 drugs mentioned in this group.

Dosha Karma: Pittahara

Bheshaja Karma: Vishahara

Rogaghna Karma: Visha, Daha (Bahya and abhyantara)

21. परुषकादि गण

परुषकद्राक्षाकट्फलदाडिमराजादनकतकफलशाकफलानि त्रिफला चेति ।

परुषकादिरित्येष गणोऽनिलविनाशनः । मूत्रदोषहरो हृद्यः पिपासघ्नो रुचिप्रदः ॥ (S.S.Su 38/43-44)

1. Parushaka- *Grewia asiatica* L.
2. Draksha- *Vitis vinifera* Linn.
3. Katphala- *Myrica esculenta* Buch-Ham.
4. Dadima- *Punica granatum* Linn.

5. Rajadana- *Manilkara hexandra* (Roxb.) Dubard
6. Katakaphala- *Strychnospotatorum* Linn.
7. Shakaphala- *Tectona grandis* Linn. f.
8. Haritaki- *Terminalia chebula* Roxb.
9. Amalaki- *Emblica officinalis* Gaertn.
10. Vibhitaki- *Terminalia bellerica* Roxb.

There are 10 drugs mentioned in this group.

Doshaghna Karma: Vatahara

Bheshaja Karma: Hridya, Ruchiprada

Rogaghna Karma: Mutradosha, Pipasa

22. प्रियङ्ग्वादि गण

प्रियङ्गसमङ्गाधातकीपुन्नागनागपुष्पचन्दनकुचन्दनमोचरसरसाञ्जनकुम्भीकस्रोतोरजनपद्मकेसरयोरजनवल्यो दीर्घमूला चेति । (S.S.Su 38/45)

1. Priyangu- *Calicarpa macrophylla* Vahl.
2. Samanga- *Mimosa pudica* L.
3. Dhataki- *Woodfordia floribunda* Salisb.
4. Punnaga- *Calophyllum inophyllum* L.
5. Nagapushpa- *Mesua ferrea* L.
6. Chandana- *Santalum album* L.
7. Kuchandana- *Pterocarpus santalinus*L.f.
8. Mocharasa- Niryasa of *Salmalia malabarica* (DC) Schott & Endl.
9. Rasanjana- *Berberis aristata* DC.
10. Kumbheeka- *Careya arborea* Roxb.
11. Srotonjana- Collyrium
12. Padma kesara- *Nelumbo nucifera* Gaertn.
13. Yojanavalli- *Rubia cordifolia* L.
14. Deerghamula- *Alhagi camelorum* Fisch.

There are 14 drugs mentioned in this group.

Doshaghna Karma: Pittahara

Bheshaja Karma: Sandhaneeya, Sangrahi

Rogaghna Karma: Mutradosha, Pipasa

23. अम्बष्ठादि गण

अम्बष्ठाधातकीकुसुमसमङ्गाकटवङ्गमधुकविल्वपेशिकासावरोधपलाशनन्दीवृक्षा: पद्मकेशराणि चेति । गणौ प्रियङ्ग्वम्बष्ठादी पक्कातीसारनाशनौ । सन्धानीयौ हितौ पित्ते व्रणानां चापि रोपणौ ॥ (S.S.Su 38/46-47)

1. Ambhashta- *Cycleapeltata* Hook.fil & Thoms.
2. Dhataki Kusuma- *Woodfordia floribunda* Salisb.
3. Samanga- *Mimosa pudica* L.
4. Katvanga- *Ailanthus excelsa* Roxb.
5. Madhuka- *Glycyrrhiza glabra* Linn.
6. Bilvapeshika- Shell of *Aegle marmelos* Corr.
7. Savaralodhra- *Symplocos crategoides* Buch. Ham.ec D. Don.
8. Palasha- *Butea monosperma* (Lam.) Taub.
9. Nandi vriksha- *Tabernaemontana divericata* (L. R.Br.ex Roem. & Schult.
10. Padma keshara- Stamens of *Nelumbonucifera* Gaertn.

There are 10 drugs mentioned in this group.

Doshaghna Karma: Pittahara

Bheshaja Karma: Sandhaneeya, Ropana

Rogaghna Karma: Pakvatisara, Bhagna, Vrana

24. न्यग्रोधादि गण

न्यग्रोधोदुम्बराश्वत्थप्लक्षमधुककपीतनककुभाम्रकोशाम्रचोरकपत्रजम्बूद्वयप्रियालमधूकरोहिणीवञ्जुलकदम्बबदरीतिन्दकीसल्लकीरोध्रसावररोध्रभल्लातक्पलाशा नन्दीवृक्षश्चेति ।

न्यग्रोधादिगणो व्रण्य: सङ्ग्राही भग्नसाधक: । रक्तपित्तहरो दाहमेहोघ्नो योनिदोषहृत् ॥ (S.S.Su 38/48-49)

1. Nyagrodha- *Ficus bengalensis* Linn.
2. Udumbara- *Ficus glomerata* Roxb.
3. Ashwattha- *Ficus religiosa* Linn.
4. Plaksha- *Ficus lacor* Buch-Ham.
5. Madhuka- *Glyccyrrhiza glabra* Linn.
6. Kapeetana- *Thespesia populnea* Soland ex Correa.
7. Kakubha- *Terminalia arjuna* Roxb.
8. Amra- *Mangifera indica* Linn.
9. Koshamra- *Schleira trijuga* Willd.
10. Chorakapatra- *Angelica glauca* Edgw.

Jambudwaya- Raja jambu & Kshudrajambu

11. Raja Jambu- *Syzygium jambos* L.
12. Kshudra Jambu- *Syzygiumcumini* Skeels.
13. Priyala- *Buchanania lanzan* Spreng.
14. Madhuka- *Madhuka indica* J.F. Gmel.
15. Rohini- *Myrica esculenta* Buch. Ham. ex. D. Don.
16. Vanjula- *Salix caprea* L.
17. Kadamba- *Anthocephalus cadamba* (Roxb.) Bosser.
18. Badari- *Zizyphus jujuba* Mill.
19. Tinduki- *Diospyros peregrina* Gaertn.
20. Shallaki- *Boswellia serrata* Roxb.
21. Rodhra- *Symplocos racemosa* Roxb.
22. Sabararodhra- *Symplocos crategoides* Miq.
23. Bhallataka- *Semecarpus anacardium* Linn.
24. Palasha- *Butea monosperma* (Linn.) Kuntze.
25. Nandi vriksha- *Thespesia populnea* Soland ex Correa.

There are 25 drugs mentioned in this group.

Doshaghna Karma: Pittahara

Bheshaja Karma: Sangrahi, Medoghna

Rogaghna Karma: Bhagna, Raktapitta, Daha, Yonidosha.

25. गुडूच्यादि गण

गुडूचीनिम्बकुस्तुम्बुरुचन्दनानि पद्मकं चेति । एष सर्व ज्वरान् हन्ति गुडूच्यादिस्तु दीपनः ॥
हृल्लासारोचकवमीपिपासादाहनाशनः । (Su.S.Su 38/50-51)

1. Guduchi- *Tinospora cordifolia* Willd Miers ex Hook f. &Thoms.
2. Nimba- *Azadirachta indica* A. Juss.
3. Kustumburu- *Coriandrum sativum* Linn.
4. Chandana- *Santalum album* Linn.
5. Padmaka- *Prunus cerasoides* D. Don.

There are 5 drugs mentioned in this group.

Bheshaja Karma: Deepana

Rogaghna Karma: Jwara, Hrillasa, Arochaka, Vami, Pipasa, Daha

26. उत्पलादि गण

उत्पलरक्तोत्पलकुमुदसौगन्धिककुवलयपुण्डरीकाणि मधुकं चेति ।
उत्पलादिरियं दाहपित्तरक्तविनाशनः । पिपासाविषहृद्रोगच्छर्दिमूर्च्छाहरो गणः ॥ (S.S.Su 38/52-53)

1. Utpala- *Nymphea stellata* Willd.
2. Raktotpala- *Nymphea rubra* Roxb. ex Salisb.
3. Kumuda- *Nymphea* alba L.
4. Sougandhika- *Hedychium coronarium* (J.Koenig) Kuntze.
5. Kuvalaya- *Nymphaea nouchali* Burm f.
6. Pundareeka- *Nelumbo nucifera* Gaertn.
7. Madhuka- *Glycyrrhiza glabra* Linn.

There are 7 drugs mentioned in this group.

Doshaghna Karma: Pittahara

Rogaghna Karma: Daha, Pipasa, Visha, Hridroga, Chardi, Murcha

27. मुस्तादि गण

मुस्ताहरिद्रादारुहरुहरिद्राहरीतक्यामलकविभीतककुष्ठहैमवतीवचापाठाकटुरोहिणीशार्ङ्गेष्टाऽतिविषाद्राविडीभल्लातकानिचित्रकश्चेति ।

एष मुस्तादिको नाम्ना गणः श्लेष्मनिषूदनः ।योनिदोषहरः स्तन्यशोधनः पाचनस्तथा ॥ (S.S.Su 38/54-55)

1. Musta- *Cyperus rotundus* Linn.
2. Haridra- *Curcumalonga* Linn.
3. Daruharidra- *Berberis aristata* DC.
4. Haritaki- *Terminalia chebula* Retz.
5. Amalaki- *Emblica officinalis* Gaertn.
6. Vibhitaki- *Terminalia bellerica* Roxb.
7. Kushta- *Saussurealappa* C. B Clarke.
8. Haimavati- *Iris ensata* Thumb.
9. Vacha- *Acorus calamus* Linn.
10. Patha- *Cissampelos pareira* Linn.
11. Katurohini- *Picrorrhizakurroa* Royle ex Benth.
12. Sharngeshta- *Physalis minima* L.
13. Ativisha- *Aconitum heterophyllum* Wll.
14. Dravidi- *Elattaria cardamomum* Maton.

15. Bhallataka- *Semecarpus anacardium* Linn.
16. Chitraka- *Plumbago zeylanica* Linn.

There are 16 drugs mentioned in this group.

Dosaghna Karma: Kaphahara

Bheshaja Karma: Yonidoshahara, Stanyashodhana, Pachana

28. त्रिफला

हरीतक्यामलकविभीतकानीति त्रिफला ।

त्रिफला कफपित्तघ्नी मेहकुष्ठविनाशनी ॥ चक्षुष्या दीपनी चैव विषमज्वरनाशिनी । (S.S.Su 38/56-57)

1. Haritaki – *Terminalia chebula* Retz.
2. Amalaki – *Emblica officinalis* Gaertn.
3. Vibhitaki – *Terminalia bellerica* Roxb.

There are 3 drugs mentioned in this group.

Doshaghna Karma: Kapha-pittahara

Bheshaja Karma: Chakshushya, Deepani

Rogaghna Karma: Meha, Kushta, Vishamajwara

29. त्रिकटु

पिप्पलीमरिचशृङ्गवेराणीति त्रिकटुकम् ।

त्र्यूषणं कफमेदोघ्नं मेहकुष्ठत्वगामयान् ॥ निहन्याद्दीपनं गुल्मपीनसाग्न्यल्पतामपि । (S.S.Su 38/58-59)

1. Pippali- *Piper longum* Linn.
2. Maricha- *Piper nigrum* Linn.
3. Shringavera- *Zingiber officinale* Roxb.

There are 3 drugs mentioned in this group.

Doshaghna Karma: Kaphahara

Bheshaja Karma: Medohara, Deepana

Rogaghna Karma: Meha, Kushta, Twakroga, Gulma, Peenasa, Agnimandya

30. आमलक्यादि गण

आमलकीहरीतकीपिप्पल्यश्चित्रकश्चेति ॥

आमलक्यादिरित्येष गणः सर्वज्वरापहः । चक्षुष्यो दीपनो वृष्यः कफारोचकनाशनः ॥ (S.S.Su 38/60-61)

1. Amalaki- *Emblica officinalis* Gaertn.
2. Haritaki- *Terminalia chebula* Retz.

3. Pippali- *Piper longum* Linn.
4. Chitraka- *Plumbago zeylanica* Linn.

There are 4 drugs mentioned in this gana.

Doshaghna Karma: Kaphahara

Bheshaja Karma: Chakshushya, Deepana, Vrishya

Rogaghna Karma: Sarvajwara, Arochaka

31. त्रप्वादि गण

त्रपुसीसताम्ररजतसुवर्णकृष्णलोहानि लोहमलश्चेति ।

गणस्त्रप्वादिरित्येष गरकृमिहरः परः । पिपासाविषहृद्रोगपाण्डुमेहहरस्तथा ॥ (S.S.Su 38/62-63)

1. Trapu (Vanga)- Tin
2. Seesa (Naga)- Lead
3. Tamra- Copper
4. Rajata- Silver
5. Suvarna- Gold
6. Krishna loha- Iron
7. Loha mala- Rust of Iron

There are 7 drugs mentioned in this gana.

Bheshaja Karma: Garavishahara

Rogaghna Karma: Krimi, Pipasa, Hridroga, Pandu, Meha

32. लाक्षादि गण

लाक्षारेवतकुटजाश्वमारकट्फलहरिद्रा द्वयनिम्बसप्तच्छदमालत्यस्त्रायमाणा चेति ।

कषायतिक्तमधुरः कफपित्तार्तिनाशनः । कुष्ठकृमिहरश्चैव दुष्टव्रणविशोधनः ॥ (S.S.Su 38/64-65)

1. Laksha- *Lacciferalacca* Kerr.
2. Arevata- *Cassia fistula* Linn.
3. Kutaja- *Holorrhenaantidysenterica* (Linn.) Wall.
4. Ashwamara- *Nerium indicum* Miil.
5. Katphala- *Myrica esculenta* Buch. Ham.
6. Haridra- *Curcuma longa* Linn.
7. Daruharidra- *Berberis aristata* DC.
8. Nimba- *Azadirachta indica* A. Juss.

There are 8 drugs mentioned in this group.

Doshaghna Karma: Kapha-pittahara

Bheshaja Karma: Vranavishodhana

Rogaghna Karma: Arti, Kushta, Krimi, Dushtavrana

33. कनीयपञ्चमूल

तत्र त्रिकण्टकबृहतीद्वयपृथक्पर्णो विदारिगन्धा चेति कनीयः ॥

कषायतिक्तमधुरं कनीयं पञ्चमूलकम् । वातघ्नं पित्तशमनं बृंहणं बलवर्धनम् ॥ (S.S.Su 38/67-68)

1. Trikantaka- *Tribulus terrestris* Linn.
2. Brihati- *Solanum indicum* Linn.
3. Kantakari- *Solanum xanthocarpum* Schrad.
4. Prithakparni- *Urariapicta* Devs.
5. Vidarigandha- *Desmodium gangeticum* DC.

There are 5 drugs mentioned in this group.

Doshaghna Karma: Vata-Pittahara

Bheshaja Karma: Brimhana, Balavardhana

34. महत् पञ्चमूल/ बृहत् पञ्चमूल

बिल्वाग्निमन्थटिण्टुकपाटलाः काश्मरी चेति महत् ।

सतिक्तं कफवातघ्नं पाके लघ्वग्निदीपनम् ॥ मधुरानुरसं चैव पञ्चमूलं महत् स्मृतम् । (S.S.Su 38/69-70)

1. Bilva- *Aegle marmelos* Corr.
2. Agnimantha- *Premna integrifolia* L.
3. Tintuka- *Oroxylum indicum* Vent.
4. Patala- *Stereospermumsuaveolens* DC.
5. Kashmari- *Gmelina arborea* Linn.

There are 5 drugs mentioned in this group.

Dosaghna Karma: Kapha-Vatahara

Bheshaja Karma: Agnideepana

35. दशमूल

अनयोर्दशमूलमुच्यते ।

गणः श्वासहरो ह्येष कफपित्तानिलापहः । आमस्य पाचनश्चैव सर्वज्वरविनाशनः ॥ (S.S.Su 38/71-72)

Kaniya and Mahatpanchamula together considered as Dashamula

There are 10 drugs mentioned in this group.

Doshaghna Karma: Kapha-pitta-Vatahara (Tridoshahara)

Bheshaja Karma: Shwasahara, Amapachana

Rogaghna Karma: Sarvajwara

36. वल्ली पञ्चमूल

विदारीसारिवारजनीगुडूच्योऽजशृङ्गी चेति वल्ली संज्ञः। (S.S.Su 38/4-5)

1. Vidari- *Pureria tuberosa* DC.
2. Sariva- *Hemidesmus indicus* R. Br.
3. Rajani- *Rubia cordifolia* Linn.
4. Guduchi- *Tinospora cordifolia* Willd Miers ex Hook f. & Thoms
5. Ajashringi- *Gymnema sylvestrae* R. Br.

There are 5 drugs mentioned in this group.

37. कण्टकपञ्चमूल

करमर्दत्रिकण्टकसैरेयकशतावरीगृध्रनख्य इति कण्टकसंज्ञः ।

रक्तपित्तहरौ ह्येतौ शोफत्रयविनाशनौ । सर्वमेहहरौ चैव शुक्रदोषविनाशनौ ॥ (S.S.Su 38/74-75)

1. Karamarda- *Carissa carandes* L.
2. Trikantaka- *Tribulus terrestris* Linn.
3. Saireyaka- *Barleria prionitis* Linn.
4. Shatavari- *Asparagus racemosus* Willd.
5. Gridhranakhi- *Capparis zeylanica* L.

There are 5 drugs mentioned in this group.

Doshaghna Karma: Pittahara

Rogaghna Karma: Raktapitta, 3 types ofshopha, Meha, Shukradosha

38. तृणपञ्चमूल

कुशकाशनलदर्भकाण्डेक्षुका इति तृणसंज्ञकः ।

मूत्रदोषविकारं च रक्तपित्तं तथैव च ॥ अन्त्यः प्रयुक्तः क्षीरेण शीघ्रमेव विनाशयेत् । (S.S.Su 38/76-77)

1. Kusha- *Desmostachys bipinnata* Stapf.
2. Kasha- *Saccharum spontaneum* Linn.
3. Nala- *Arundo donax* Linn.
4. Darbha- *Imperata cylindrica* Beauv.
5. Kandekshuka- *Saccharum officinarum* Linn.

There are 10 drugs mentioned in this group.

Doshaghna Karma: Pittahara

Roghaghna Karma: Mutradosha, Raktapitta

3. Vagbhata

Acharya Vagbhata exemplified the 'Shodhanadigana' in his 15th chapter of Sutra sthana of Ashtanga Hridaya. Here the word shodhanadi refers to the Dravyas which are useful for both shodhana (Purificatory) and shamana (Pallliative) treatment. The drugs described here helps to eliminate the vitiated doshas from the body as well as mitigates the doshas within the body. Vagbhata says that, the shodhana Dravyas are superior than the shamana Dravyas. Hence the drugs useful for the shodhana procedures are described first.

1. वमन गण

मदनमधुकलम्बानिम्बबिम्बीविशालात्रपुसकुटजमूर्वादेवदालीकृमिघ्नम् ।
विदुलदहनचित्राः कोशवत्यौ करञ्जःकणलवणवचैलासर्षपाश्छर्दनानि ॥ (A.H.Su 15/1)

1. Madana/Madanaphala- *Randiadumetorum* (Retz.) Poir
2. Madhuka/Yashtimadhu- *Glyccyrrhiza glabra* Linn.
3. Lamba/Ikshwaku/Tiktalabu- *Lagenaria siceraria* (Molina) Standl.
4. Nimba- *Azadirachta indica* A. Juss
5. Bimbi- *Coccinia grandis* (L.) Voigt
6. Vishala/Indravaruni- *Citrullus colocynthis* Schrad
7. Trapusa/Karkati- *Cucumis sativus* Linn.
8. Kutaja- *Holarrhinaantidysenterica* (Linn.) Wall.
9. Murva- *Marsdeniatenacissima* (Roxb.)
10. Devadali/Jeemutaka- *Luffa echinata* Roxb.
11. Krimighna/Vidanga- *Embeliaribes* Burm
12. Vidula/Nichula- *Barringtonia acutangula* Gaertn.
13. Dahana/Chitraka- *Plumbago zeylanica* Linn.
14. Chitra- *Trichosanthes dioica* Roxb.
   Koshavatyou- *Koshataki & Dhamargava*
15. Koshataki- *Luffa acutangular* Linn.
16. Dhamargava- *Luffa cylindrica* Linn.
17. Karanja- *Pongamia pinnata* Pierre

18. Kana/Pippali- *Piper longum* Linn.
19. Lavana- *Rock salt*
20. Vacha- *Aacorus calamus* Linn.
21. Ela- *Elettaria cardamomum* Maton
22. Sarshapa- *Brassica campestris* Linn.

There are 20 drugs mentioned in this group.

2. विरेचन गण

निकुम्भकुम्भत्रिफलागवाक्षीस्नुक् शंङ्खिनीनीलिनीतिल्वकानि ।
शम्याककम्पिल्लकहेमदुग्धा दुग्धं च मूत्रं च विरेचनानि ॥ (A.H.Su 15/2)

1. Nikumbha/Danti- *Baliospermum montanum* Muell-Arg.
2. Kumbha/Trivrit- *Operculina turpethum* Linn.
3. Haritaki- *Terminalia chebula* Retz.
4. Amalaki- *Emblica officinalis* Gaertn.
5. Vibhitaki- *Terminalia bellerica* Roxb.
6. Gavakshi/Indravaruni- *Citrullus colocynthis* Schrad.
7. Snuk/Snuhi- *Euphorbia nerifolia* Linn.
8. Shankhini- *Clitorea ternatia* L.
9. Neelini- *Indigofera tinctoria* L.
10. Tilvaka/Lodhra- *Symploco sracemosa* Roxb.
11. Shamyaka/Aragadha- *Cassia fistula* Linn.
12. Kampillaka- *Mallotus phillippinensis* Muell. Arg
13. Hemdugdha/Swarnakshiri- *Argemone Mexicana* Linn.
14. Dugdha- Milk
15. Mutra- Urine

There are 15 drugs mentioned in this group.

3. निरूह गण

मदनकुटजकुष्ठदेवदालीमधुकवचादशमूलदारुरास्नाः ।
यवमिशिकृतवेधनं कुलत्था मधु लवणं त्रिवृता निरूहाणि ॥ (A.H.Su 15/3)

1. Madana/Madanaphala- *Randia dumetorum* (Retz.) D. dietr.
2. Kutaja- *Holarrhena antidysenterica* Wall.
3. Kushta- *Saussurea lappa* (Falc.) Lipsch.

4. Devadali/Jeemutaka- *Luffa echinata* Roxb.
5. Madhuka/Yashtimadhu- *Glyccyrrhiza glabra* L.
6. Vacha- *Acorus calamus* Linn.
7. Bilva- *Aegle marmelos* Corr.
8. Agnimantha- *Premna integrifolia* L.
9. Shyonaka- *Oroxylum indicum*(L.) Benth. Ex Kurz
10. Patala- *Stereospermum suaveolens* (Roxb.) Dalzell & A. Gibson
11. Gambhari- *Gmelina arborea* Linn.
12. Shalaparni- *Desmodium gangeticum* DC.
13. Prishniparni- *Uraria picta* Devs
14. Brihati- *Solanum indicum* Linn.
15. Kantakari- *Solanum xanthocarpum* Schrad.
16. Gokshura- *Tribulus terrestris* Linn.
17. Daru/Devadaru- *Cedrus deodora* (Roxb.) Loud
18. Rasna- *Pluchea lanceolata* C.B. Clarke
19. Yava- *Hordeum vulgare* L.
20. Mishi/Shatapushpa- *Anethum graveolens* L.
21. Krutavedhana- *Luffa acutangula* (L.) Roxb.
22. Kulattha- *Dolichos biflorus* L.
23. Madhu- Honey
24. Lavana- Rock salt
25. Trivrit- *Operculinaterpethum* (L.) Silva Manso

There are 25 drugs mentioned in this group.

4. नावन गण

वेल्लापामर्गव्योपदार्वीसुराला वीजं शैरीषं बार्हतं शैग्रवं च ।
सारो माधूकः सैन्धवं तार्क्ष्यशैलं त्रुट्यौ पृथ्वीकाशोधयन्त्युत्तमाङ्गम् ॥ **(a.h.su 15/4)**

1. Vella- *Embelia ribes* Burm
2. Apamarga- *Achyranthes aspera* Linn.
3. Pippali- *Piper longum* Linn.
4. Maricha- *Piper nigrum* Linn.
5. Shunti- *Zingiber officinale* Roxb.
6. Darvi- *Berberis aristata* DC.

7. Surala/Shriveshtaka- *Pinus roxburgii* Sarg.
8. Shaireeshabeeja- *Seeds of Albizzia lebbeck* (L.) Benth
9. Madhuka sara- Juice of flowers of *Madhuka indica* (Mahua)
10. Saindhava- Rock salt
11. Tarkshyashaila/Rasanjana- Anjana prepared from Daruharidra (*Berberis aristate* DC.)

    Trutyou- *Sukshma Ela & Sthula Ela*
12. Sukshmaela- *Elattaria cardamomum* (L.) Maton
13. Sthulaela- *Ammomum subulatum* Roxb.
14. Prithweeka/Hingupatrika- *Ferula narthex* Boiss.

There are 14 drugs mentioned in this group.

5. वातघ्न गण

भद्रदारु नतं कुष्ठं दशमूलं बलाद्वयम् । वायुं वीरतरादिश्च विदार्यादिश्च नाशयेत् ॥ (A.H.Su 15/5)

1. Bhadradaru/Devadaru- *Cedrus deodara* (Roxb.) Loud
2. Nata/Granthi Tagara- *Valerianawallaichi* D.C
3. Kushta- *Saussurealappa* C. B. Clarke

    Drugs of Dashamulagana
4. Bilva- *Aegle marmelos* Corr.
5. Agnimantha- *Premna integrifolia* L.
6. Shyonaka- *Oroxylum indicum* Vent.
7. Patala- *Stereospermum suaveolens* DC.
8. Gambhari- *Gmelina arborea* Linn.
9. Shalaparni- *Desmodium gangeticum* DC.
10. Prishniparni- *Urariapicta* Devs.
11. Brihati- *Solanum indicum* Linn.
12. Kantakari- *Solanum xanthocarpum* Schrad
13. Gokshura- *Tribulus terrestris* Linn.

    Baladwaya- *Bala & Atibala*
14. Bala- *Sida cordifolia*
15. Atibala- *Abutilon indicum* Linn.

Drugs of Veeratarvadi Gana and Vidaryadi Gana are also included in this group. There are 47 drugs mentioned in this group.

6. पित्तघ्न गण

द्रूर्वाऽनन्ता निम्बवासाऽऽत्मगुप्ता गुन्द्राऽभीरुः शीतपाकी प्रियङ्गः ।
न्यग्रोधादिः पद्मकादिः स्थिरे द्वे पद्मं वन्यं सारिवादिश्च पित्तम् ॥ (A.H.Su 15/6)

1. Durva- *Cynodon dactylon* Pers
2. Ananta/Sariva- *Hemisdemus indicus* R. Br.
3. Nimba- *Azadirachta indica* A. Juss
4. Vasa- *Adathoda vasica* Nees
5. Atmagupta/Kapikacchu- *Mucuna pruriens* Hook.
6. Gundra/Eraka- *Typha elephantina* Roxb.
7. Abheeru/Shatavari- *Asparagus racemosus* Willd.
8. Sheetapaki/Gunja- *Abrus precatorius* Linn.
9. Priyangu- *Callicarpa macrophylla* Vahl.

Drugs of Nyagrodhadigana, Padmakadigana

Sthiredwe- *Shalaparni & Prishniparni*

10. Shalaparni- *Desmodium gangeticum* DC
11. Prishniparni- *Uraria picta* Devs
12. Padma- *Nelumbo nucifera* Gaertn.
13. Vanya- *Oroxylum indicum* Vent.

7. श्लेष्मघ्न गण

आरग्वधादिरर्कादिर्मुष्ककाद्योऽसनादिकः । सुरसादिः समुस्तादिर्वत्सकादिर्वलासजित् ॥ (A.H.Su 15/7)

The drugs of Aragwadhadi, Arkadi, Mushkakadi, Asanadi, Surasadi, Mustadi and Vatsakadi are mentioned under Kaphashamaka Gana.

8. जीवनीय गण

जीवन्ती काकोल्यौ मेदे द्वे मुद्गमाषपर्ण्यौ च । ऋषभकजीवकमधुकं चेति गणो जीवनीयाख्यः ॥ (A.H.Su 15/8)

1. Jeevanti- *Leptadenia reticulata* W. & A.

Kakolyou- *Kakoli & Kshirakakoli*

2. Kakoli- *Roscoea purpurea Smith*
3. KsheeraKakoli- *Lilium polyphyllum* D. Don

Mede dwe- *Meda & Mahameda*

Meda- *Polygonatum verticillatum* (L.) All.

Mahameda- *Polygonatum cirrhifolium* (Wall.)

Mudgaparni- *Phaseolus trilobus*Ait

7. Mashaparni- *Teramnus labialis* Spreng.
8. Rishabhaka- *Microstylis muscifera* (Lindl.) Ridl.
9. Jeevaka- *Microstylis wallichi* Linn.
10. Madhuka/Yashtimadhu- *Glyccyrrhiza glabra* Linn.

9. विदार्यादि गण

विदारीपञ्चाङ्गलवृश्चिकालीवृश्चीवदेवाह्वयशूर्पपर्ण्यः । कण्डूकरी जीवनह्रस्वसंज्ञे द्वे पञ्चके गोपसुता त्रिपादी ॥
विदार्यादिरयं हृद्यो वृंहणो वातपित्तहा । शोपगुल्माङ्गमर्दोर्ध्वश्वासकासहरो गणः॥ (A.H.Su 15/9-10)

1. Vidari- *Pueraria tuberosa* DC
2. Panchangula/Eranda- *Ricinus communis* Linn.
3. Vrishchikali- *Pergularia extensa* N. E. Br.
4. Vrishcheeva/Punarnava- *Boerhavia diffusa* Linn.
5. Devahvaya/Devadaru- *Cedrus deodara* (Roxb.) Loud.
6. Mudgaparni- *Phaseolus trilobus* Ait.
7. Mashaparni- *Teramnus labialis* Spreng.
8. Kandukari/Kapikacchu- *Mucuna pruriens* Hook

Drugs of Jeevanapanchamula

9. Abheeru/Shatavari- *Asparagus racemosus* Willd
10. Veera/Arjuna- *Terminalia arjuna* (Roxb.)
11. Jeevanti- *Leptadenia reticulata* (Retz.) Wight &Arn.
12. Jeevaka- *Microstylis wallichi* Linn.
13. Rishabhaka- *Microstylis muscifera* (Lindl.) Ridl.

Drugs of Hraswapanchamula

14. Brihati- *Solanum indicum* L.
15. Kantakari- *Solanum xanthocarpum* Schrad.
16. Gokshura- *Tribulus terrestris* Linn.
17. Shalaparni- *Desmodium gangeticum* DC
18. Prishniparni- *Urariapicta* Devs
19. Gopasuta/Sariva- *Hemidesmus indicus* R. Br.
20. Tripadi/Hamsapadi- *Adiantum lunulatum* Burm.

There are 20 drugs mentioned in this group.

Doshaghna Karma: Vata-pittahara

Bheshaja Karma: Hridya, Brimhana

Rogaghna Karma: Shosha, Gulma, Angamarda, Urdhwashwasa & Kasa

10. सारिवादि गण

सारिवोशीरकाश्मर्यमधूकशिशिरद्वयम् । यष्टी परुषकं हन्ति दाहपित्तास्रतृड्ज्वरान् ॥ (A.H.Su 15/11)

1. Sariva- *Hemidesmus indicus* R. Br.
2. Usheera- *Vetiverazizanoides* (Linn.) Nash.
3. Kashmarya/Gambhari - *Gmelina arborea* Linn.
4. Madhuka- *Madhuka indica* J. F. Gmel

   Shishiradwaya- *Shweta Chandana & Rakta Chandana*
5. Shweta Chandana- *Santalum album* Linn.
6. Rakta Chandana- *Pterocarpus santalinus* Linn. f.
7. Yashtimadhu- *Glycyrrhiza glabra* Linn.
8. Parushaka- *Grewia asiatica* L.

There are 8 drugs mentioned in this group.

Doshaghna Karma: Pittahara

Rogaghna Karma: Daha, Pittasra (Raktapitta), Trishna&Jwara

11. पद्मकादि गण

पद्मकपुण्ड्रौ वृद्धितुगर्द्ध्यः शृङ्ग्यमृता दश जीवनसंज्ञाः ॥
स्तन्यकरा घ्नन्तीरणपित्तं प्रीणनजीवनबृंहणवृष्याः । (A.H.Su 15/12)

1. Padmaka- *Prunus cerasoides* D. Don
2. Pundra- *Nelumbo nucifera* Gaertn.
3. Vriddhi- *Habenaria edgeworthii* Hook.f.
4. Tuga/Twakshiri- *Bambusa arundinaceae* Willd.
5. Shringi/Karkatashringi- *Pistacia intergerrima* Stewart ex. Brandis.

   Drugs of Jeevantyadi Gana
6. Jeevanti- *Leptadenia reticulata* (Retz.) Wight &Arn.
7. Kakoli- *Roscoea purpurea* Smith
8. Ksheera Kakoli- *Lilium polyphyllum* D. Don
9. Meda- *Polygonatum verticillatum* Linn.
10. Mahameda- *Polygonatum cirrhifolium* (Wall.)
11. Mudgaparni- *Vigna trilobata* (L.) Verdc.
12. Mashaparni- *Teramnus labialis* Spreng.
13. Rishabhaka- *Microstylis muscifera* (Lindl.) Ridl.

14. Jeevaka- *Microstylis wallichi* Linn.
15. Madhuka- *Glyccyrrhiza glabra* Linn.

There are 15 drugs mentioned in this group.

Doshaghna Karma: Vata-pittahara

Bheshaja Karma: Preenana, Jeevana, Brimhana, Vrishya

12. परुषकादि गण

परुषकं वरा द्राक्षा कट्फलं कतकात् फलम् । राजाह्वं दाडिमं शाकं तृण्मूत्रामयवातजित् ॥ (A.H.Su 15/13)

1. Parushaka- *Grewia asiatica* L.

   Drugs of Vara/Triphalagana
2. Haritaki- *Terminalia chebula* Retz.
3. Amalaki- *Emblica officinalis* Gaertn.
4. Vibhitaki- *Terminalia bellerica* Roxb.
5. Draksha- *Vitis vinifera* Linn.
6. Katphala- *Myrica esculenta* Buch- Ham.
7. Kataka- *Strychnos potatorum* Linn.
8. Rajahwa/Rajadana- *Mimusops hexandra* (Roxb.) Dubard
9. Dadima- *Punica granatum* Linn.
10. Shaka- *Tectona grandis* Linn.

There are 10 drugs mentioned in this group.

Doshaghna Karma: Vatahara

Rogaghna Karma: Trishna & Mutraroga

13. अञ्जनादि गण

अञ्जनं फलिनी मांसी पद्मोत्पलरसाञ्जनम् । सैलामधुकनागाह्वं विषान्तर्दाहपित्तनुत् ॥
(A.H.Su 15/14)

1. Anjana/Srotonjana- *Antimony sulphide*
2. Phalini- *Callicarpa macophylla* Vahl.
3. Mamsi/Jatamansi- *Nardostachys jatamansi* DC
4. Padma- *Nelumbo nucifera* Gaertn.
5. Utpala- *Nymphaea stellata* Willd.
6. Rasanjana- Collyrium prepared from *Berberis aristata*
7. Ela- *Elettaria cardamomum* Maton.

8. Madhuka/Yashtimadhu- *Glyccyrrhiza glabra* Linn.
9. Nagahwa/Nagakesara- *Mesua ferrea* Linn.

There are 9 drugs mentioned in this group.

Doshaghna Karma: Pittahara

Rogaghna Karma: Visha & Antardaha

14. पटोलादि गण

पटोलकटुरोहिणीचन्दनं मधुस्रवगुडूचीपाठान्वितम् ।
निहन्ति कफपित्तकुष्ठज्वरान् विषं वमिमरोचकं कामलाम् ॥ (A.H.Su 15/15)

1. Patola- *Trichosanthes dioica* Roxb.
2. Katurohini- *Picrorrhiza kurroa* Royle ex. Benth
3. Chandana- *Santalum album* Linn.
4. Madhusrava/Murva- *Marsedenia tenacissima* (Roxb.)
5. Guduchi- *Tinospora cordifolia* Willd Miers ex Hook f. &Thoms
6. Patha- *Cissampelos pereira* Linn.

There are 6 drugs mentioned in this group.

Doshaghna Karma: Kapha-pittahara

Rogaghna Karma: Kushta, Jwara, Visha, Chardi, Arochaka, Kamala

15. गुडूच्यादि गण

गुडूचीपद्मकारिष्टधानकारक्तचन्दनम् । पित्तश्लेष्मज्वरच्छर्दिदाहतृष्णाघ्नमग्निकृत् ॥ (A.H.Su 15/16)

1. Guduchi- *Tinospora cordifolia* Willd Miers ex Hook f. & Thoms
2. Padma- *Prunus cerasoides* D. Don.
3. Arishta- *Azadirachta indica* A. Juss
4. Dhanaka- *Coriandrum sativum* Linn.
5. Rakta Chandana- *Pterocarpus santalinum* Linn. f.

There are 5 drugs mentioned in this group.

Doshaghna Karma: Pitta-shleshmahara

Bheshaja Karma: Agnikrit

Rogaghna Karma: Jwara, Chardi, Daha, Trishna

16. आरग्वधादि गण

आरग्वधेन्द्रयवपाटलिकाकतिक्तानिम्बामृतामधुरसास्रुववृक्षपाठाः।
भूनिम्बसैरेयकपटोलकरञ्जयुग्मसप्तच्छदाग्निसुषवीफलबाणघोण्टाः ॥

आरग्वधादिर्जयति छर्दिकुष्ठविषज्वरान् । कफं कण्डूं प्रमेहं च दुष्टव्रणविशोधनः ॥ (a.h.su 15/17-18)

1. Aragwadha- *Cassia fistula* Linn.
2. Indrayava/Kutajabeeja- *Seeds of Holarrhena antidysenterica*(Linn.) Wall.
3. Patali- *Stereospermum suaveolens* DC
4. Kakatikta- *Trichosanthes tricuspidata*
5. Nimba- *Azadirachta indica* A. Juss
6. Amruta- *Tinospora cordifolia* Willd Miers ex Hook f. & Thoms
7. Madhurasa/Murva- *Marsedenia tenacissima* (Roxb.)
8. Sruvavriksha/Vikankata- *Flacourtia indica* (Burm.f.) Merr.
9. Patha- *Cissampelos pareira* Linn.
10. Bhunimba- *Andographis paniculata* Nees
11. Saireyaka- *Barleriaprionitis* Linn.
12. Patola- *Trichosanthes dioica* Roxb.
    Karanjayugma - Karanja & Kantakikaranja
13. Karanja- *Pongamia pinnata* Pierre
14. Kantaki Karanja- *Caesalpinia crista* Linn.
15. Saptacchada- *Alstonia scholaris* R. Br.
16. Agni/Chitraka- *Plumbago zeylanica* Linn.
17. Sushavi- *Momordica charantia* Linn.
18. Phala- *Randia dumetorum* (Retz.) Poir.
19. Bana- *Barleria prionitis* Linn.
20. Ghonta/Badara- *Zizyphus jujuba* Mill.

There are 20 drugs mentioned in this group.

Doshaghnakarma: Kaphahara

Roghaghnakarma: Kushta, Jwara, Visha, Chardi, Arochaka, Kamala

17. असनादि गण

असनतिनिशभूर्ज श्वेतवाहप्रकीर्याः खदिरकदरभण्डीशिंशिपामेषशृङ्ग्यः।
त्रिहिमतालपलाश जोङ्गकः शाकशालौक्रमुकधवकलिङ्गच्छागकर्णाश्वकर्णाः॥
असनादिर्विजयते श्वित्रकुष्ठकफक्रमीन् । पाण्डुरोगं प्रमेहं च मेदोदोषनिबर्हणः ॥ (A.H.Su 15/19-20)

1. Asana- *Pterocarpus marsupium* Roxb.
2. Tinisha- *Ougeinia dalberigiodes* (Roxb.) Hochr.
3. Bhurja- *Betula utilis* D. Don

There are 7 drugs mentioned in this group.

Doshaghna Karma: Kaphahara

Bheshaja Karma: Medohara

Rogaghna Karma: Mutrakricchra, Ashmari and Gulma

20. वीरतर्वादि गण

वेल्लन्तरारणिकवूकवृषाश्मभेदगोकण्टकेत्कटसहाचरवाणकाशाः ।
वृक्षादनीनलकुशद्वयगुण्ठगुन्द्राभल्लूकमोरटकुरण्टकरम्भपार्थाः ॥
वर्गो वीरतराद्योऽयं हन्ति वातकृतान् गदान् । अश्मरीशर्करामूत्रकृच्छ्राघातरुजाहरः ॥ (A.H.Su 15/24-25)

1. Vellantara/Veerataru- *Dicrostachys cinerea* W. & A.
2. Aranika/Agnimantha- *Clerodendron phlomidis* L.f.
3. Buka/Vasuka- *Osmanthus fragrans* Lour.
4. Vrisha/Vasa- *Adathoda vasica* Nees
5. Ashmabheda/Pashanabheda- *Bergenia ligulata* (Wall.) Engl.
6. Gokantaka/Gokshura- *Tribulus terrestris* L.
7. Itkata/Utkata- *Sesbania bispinosa* (Jacq.) W. Wight
8. Sahachara- *Strobilanthes heyneanus* Nees
9. Bana- *Barleria prionitis* Linn.
10. Kasha- *Saccharum spontaneum* Linn.
11. Vrikshadani- *Loranthus longiflorus* Desr.
12. Nala- *Arundo donax* Linn.
    Kushadwaya- Sookshma Durva & Sthula Durva
13. Sookshmadurva- *Desmostachya bipinnata* (L.) Stapf
14. Sthuladurva- *Desmostachya bipinnata* (L.) Stapf
15. Gunta- *Typha angustifolia* L.
16. Gundra- *Typha elephantina* Roxb.
17. Bhalluka/Shyonaka- *Oroxylum indicum* Vent.
18. Morata/Murva- *Marsedeniatinacissima* W. & A.
19. Kuranta/Peeta pushpasaireyaka-*Barleria prionitis* Linn.
20. Karambha- *Pergularia extensa* (Jacq.) N.E.Br.
21. Partha- *Terminalia arjuna* (Roxb.)

There are 21 drugs mentioned in this group.

Doshaghna Karma: Vatahara

Rogaghna Karma: Ashmari, Sharkara, Mutrakricchra, Mutraghata andRuja.

21. रोध्रादि गण

रोध्रशाबरकरोध्रपलाशाजिङ्गिणीसरलकट्फलयुक्ताः।
कुत्सिताम्बकदलीगतशोकाः सैलवालुपरिपेलवमोचाः ॥
एष रोध्रादिको नाम मेदः कफहरो गणः । योनिदोषहरः स्तम्भीवर्ण्यो विषनाशनः ॥ (A.H.Su 15/26-27)

1. Rodhra- *Symplocosracemosa* Roxb.
2. Shabararodhra- *Symplocos crategoides* Buch.-Ham. Ex. D. Don
3. Palasha- *Butea monosperma* (Linn.) Kuntze
4. Jingini- *Lannea coromandelica* (Houtt.) Merr.
5. Sarala- *Pinus roxburghii* Sargent.
6. Katphala- *Myrica esculenta* Buch Ham.
7. Yukta/Rasna- *Pluchea lanceolata* C. B. Clarke
8. Kutsitamba/Kadamba- *Anthocephalus cadamba* (Roxb.) Bosser
9. Kadali- *Musa paradisica* L.
10. Gotashoka/Asoka- *Saracaasoka* Roxb. De Wilde
11. Elavaluka- *Prunus cerasus* L.
12. Paripelava/Musta- *Cyperus rotundus* Linn.
13. Mocha- Niryasa of *Salmalia malabarica* Schott & Endl.

There are 13 drugs mentioned in this group.

Doshaghna Karma: Kaphahara

Bheshaja Karma: Medohara, Stambhi, Varnya

Rogaghna Karma: Yonidosha, Visha

22. अर्कादि गण

अर्कालर्कौ नागदन्ती विशल्या भार्ङ्गी रास्ना वृश्चिकाली प्रकीर्या ।
प्रत्यक्पुष्पी पीततैलोदकीर्या श्वेतायुग्मं तापसानां च वृक्षः ॥
अयमर्कादिको वर्गः कफमेदोविषापहः । कृमिकुष्ठप्रशमनो विशेषाद् व्रणशोधनः ॥ (A.H.Su 15/28-29)

1. Arka- *Calotropis procera* (Aiton) W.T. Aiton
2. Alarka- *Calotropis gigantea* (L.) Dryand
3. Nagadanti- *Croton oblongifolius* Roxb.
4. Vishalya/Langali- *Gloriosa superba* L.

5. Bharangi- *Clerodendronserratum* L.
6. Rasna- *Pluchea lanceolata* (DC.) C. B. Clarke
7. Vrushchikali- *Gymnemasylvestre* R. Br.
8. Prakeerya/Karanja- *Pongamia pinnata* (L.) Pierre
9. Pratyakpushpi- *Achyranthes aspera* L.
10. Peetataila/Jyotishmati- *Celastruspaniculate* Willd.
11. Udakeerya/Putikaranja- *Holoptelia integrifolia* (Roxb.)

Shwetayugma- Kinihi/Shirisha & Katabhi

12. Kinihi/Shirisha- *Albizzia lebbeck (L.) Benth*
13. Katabhi- Variety of Shirisha
14. Tapasavriksha/Ingudi- *Balanites aegyptiaca* L. Del.

There are 14 drugs mentioned in this group.

Doshaghna Karma: Kaphahara

Bheshaja Karma: Medohara, Vishahara, Vranashodhana

Rogaghna Karma: Krimi, Kushta

23. सुरसादि गण

सुरसयुग्मफणिज्जं कालमाला विडङ्ग खरवुसवृषकर्णीकट्फलं कासमर्दः ।
क्षवकसरसिभार्ङ्गीकार्मुकाः काकमाची कलहलविषमुष्टीभूस्तृणो भूतकेशी ॥
सुरसादिर्गणः श्लेष्ममेदः कृमिनिषूदनः । प्रतिश्यायारुचिश्वासकासघ्नो व्रणशोधनः ॥ (A.H.Su 15/30-31)

Surasayugma- Shweta & Krishna

1. Shweta Tulasi- *Ocimum sanctum* Linn.
2. Krishna Tulasi- *Ocimum sanctum* Linn.
3. Phanijja- *Piper nigrum* Linn.
4. Kalamala- *Orthosiphon pallidus* Royle ex Benth.
5. Vidanga- *Embeliaribes* Burm.
6. Kharabusa/Marubaka- *Origanum majorana* L.
7. Vrishakarni/Mushikakarni- *Ipomea reniformis* Choisy.
8. Katphala- *Myrica esculenta* Buch-Ham
9. Kasamarda- *Cassia occidentalis* Linn.
10. Kshavaka- *Centipeda minima* (Linn.) A. Br. & Aschers
11. Sarasi/Kapitthaparni- *Feronia elephantum* Correa

12. Bharangi- *Clerodendron serratum* (Linn.) Moon.
13. Karmuka- *Peristrophe bicalyculata* (Retz.) Nees
14. Kakamachi- *Solanum nigrum* L.
15. Kulahala- *Spaeranthus indicus* L.
16. Vishamushti- *Strychnosnuxvomica* L.
17. Bhustruna- *Cymbopogon citratus* (DC.) Stapf
18. Bhutakeshi/Jatamansi- *Nardostachysj atamansi* (D. Don) DC.

There are 18 drugs mentioned in this group.

Doshaghna Karma: Kaphahara

Bheshaja Karma: Medohara, Krimighna

Rogaghna Karma: Pratishyaya, Aruchi, Shwasa, Kasa and Vrana

24. मुष्ककादि गण

मुष्ककस्नुग्वराद्वीपिपलाशधवशिंशिपाः । गुल्ममेहाश्मरीपाण्डुमेदोर्शः कफशुक्रजित् ॥ (A.H.Su 15/32)

1. Mushkaka- *Elaeodendron glaucum* (Rottb.) Pers.
2. Snuhi- *Euphorbia nerifolia* Linn.

Vara/Triphala- Haritaki, Amalaki, Vibhitaki

3. Haritaki- *Terminalia chebula* Retz.
4. Amalaki- *Emblica officinalis* Gaertn.
5. Vibhitaki- *Terminalia bellerica* Roxb.
6. Dweepi/Chitraka- *Plumbago zeylanica* Linn.
7. Palasha- *Butea monosperma* (Linn.) Kuntze.
8. Dhava- *Anogeissus latifolia* (Roxb. Ex DC) Wall. ex Guill. &Perr
9. Shimshipa- *Dalbergia sissoo* Roxb.

There are 9 drugs mentioned in this group.

Doshaghna Karma: Kaphahara

Bheshaja Karma: Shukrahara

Rogaghna Karma: Gulma, Meha, Ashmari, Pandu, Medoroga and Arsha.

25. वत्सकादि गण

वत्सकमूर्वाभार्ङ्गी कटुका मरिचं घुणप्रिया च गण्डीरम् । एला पाठाऽजाजी कट्वङ्गफलाजमोदसिद्धार्थवचाः ॥
जीरकहिङ्गुविडङ्गं पशुगन्धा पञ्चकोलकं हन्ति । चलकफमेदः पीनसगुल्मज्वरशूलदुर्नाम्नः ॥
(A.H.Su 15/33-34)

1. Vatsaka/Kutaja- *Holarrhena antidysenterica* (Linn.) Wall.
2. Murva- *Marsedenia tinacissima* (Roxb.) Moon.
3. Bharangi- *Clerodendrum serratum* (Linn.) Moon.
4. Katuka- *Picorrhiza kurroa* Royle ex. Benth.
5. Maricha- *Piper nigrum* Linn.
6. Ghunapriya/Ativisha- *Aconitum heterophyllum* Wall.
7. Gandeera/Snuhi- *Euphorbia nerifolia* Linn.
8. Ela- *Elettaria cardamomum* Maton.
9. Patha- *Cissampelosperiera* Linn.
10. Ajaji/Jeeraka- *Cuminum cymium* Linn.
11. Katvangaphala/Aralu- *Fruit of Ailathesexcelsa* Roxb.
12. Ajamoda- *Apium graveolens* L.
13. Siddhartha/Shweta sarshapa- *Brassica compestris* Linn. Var. sarson Prain.
14. Vacha- *Acorus calamus* Linn.
15. Jeeraka- *Carum carvi* Linn.
16. Hingu- *Ferula narthex* Boiss.
17. Vidanga- *Embelia ribes* Linn.
18. Pashugandha/Ajagandha- *Gynandropsis gynandra* Linn. Briquet.

    Drugs of Panchakolagana
19. Pippali- *Piper longum* Linn.
20. Pippalimula- Roots of *Piper longum* Linn.
21. Chavya- *Piper chaba* Hunter
22. Chitraka- *Plumbago zeylanica* Linn.
23. Nagara- *Zingiber officinale* Roxb.

There are 23 drugs mentioned in this gana.

Doshaghna Karma: Kaphahara

Rogaghna Karma: Peenasa, Gulma, Jwara, Shula and Durnama (Arsha).

26. वचाहरिद्रादि गण

वचाजलददेवाह्वनागरातिविषाभयाः । हरिद्राद्वययष्ट्याह्वकलशीकुटजोद्भवाः ॥
वचाहरिद्रादिगणावामातीसारनाशनौ । मेदःकफाढ्यपवनस्तन्यदोषनिबर्हणौ ॥ (A.H.Su 15/35-36)

1. Vacha- *Acorus calamus* Linn.

2. Jalada/Musta - *Cyperus rotundus* Linn.
3. Devahva/Devadaru- *Cedrus deodara* (Roxb.) Loud
4. Nagara- *Zingiber officinale* Roxb.
5. Ativisha- *Aconitum heterophyllum* Wall.
6. Abhaya/Haritaki- *Terminalia chebula* Retz.
7. Haridra- *Curcuma longa* Linn.
8. Daruharidra- *Berberis aristate* DC.
9. Yashti- *Glycyrrhiza glabra* Linn.
10. Kalashi/Prishniparni- *Urariapicta* (Jacq.) Desv. Ex Dc.
11. Kutajodbhava- *Seeds of Holarrhena antidysenterica* (L.) Wall. Ex A. DC

There are 11 drugs mentioned in this group.

Doshaghna Karma: Kapha-Vatahara

Rogaghna Karma: Vami, Atisara, Medoroga, Stanyadosha.

27. प्रियङ्ग्वादि गण

प्रियङ्पुष्पाञ्जनयुग्मपद्माः पद्माद्रजो योजनवल्ल्यनन्ता । मानद्रुमो मोचरसः समङ्गा पुन्नागशीतंमदनीयहेतुः ॥
गणौ प्रियङ्ग्वम्बष्ठादि पक्वातीसारनाशनौ। सन्धानीयौ हितौ पित्ते व्रणानामपि रोपणौ ॥ (A.H.Su. 15/37, 39)

1. Priyangu- *Callicarpa macrophylla* Vahl.

   Pushpanjanayugma- Srotonjana & Souveeranjana
2. Srotonjana- Antimony sulphide
3. Souveeranjana- Collyrium
4. Padma/Bharangi- *Clerodendrum serratum* (L.) Moon
5. Padmadraja/Padma kesara- *Nelumbo nucifera* Gaertn.
6. Yojanavalli/Manjishta- *Rubia cordifolia* L.
7. Ananta/Yavashaka- *Alhagi camelorum* Fisch.
8. Manadruma/Shalmali- *Salmalia malabarica* L.
9. Mocharasa- Niryasa of *Salmalia malabarica* L.
10. Samanga/Lajjalu- *Mimosa pudica* L.
11. Punnaga- *Calophyllum inophyllum* L.
12. Sheeta/Shweta Chandana- *Santalum album* L.
13. Madaneeyahetu/Dhataki- *Woodfordia fruticosa* (L.) Kurz

There are 13 drugs mentioned in this group.

Doshaghna Karma: Pittahara

Bheshaja Karma: Sandhaneeya, Vranaropana

Rogaghna Karma: Pakwaatisara, Vrana.

28. अम्बष्ठादि गण

अम्बष्ठा मधुकं नमस्कारी नन्दीवृक्षपलाशकच्छुराः । रोध्रं धातकिबिल्वपिशिके कट्वङ्गः कमलोद्भवं रजः ॥
गणौ प्रियङ्ग्वम्बष्ठादि पक्वातीसारनाशनौ । सन्धानीयौ हितौ पित्ते व्रणानामपि रोपणौ ॥ (A.H.Su 15/38-39)

1. Ambashta- *Adiantum caudatum* Klotzsch
2. Madhuka- *Glycyrrhiza glabra* L.
3. Namaskari- *Mimosa pudica* L.
4. Nandi vriksha- *Ficus retusa* L.
5. Palasha- *Butea monosperma* (Lam.) Taub.
6. Kacchura/Dhanvayasa- *Fagoniacretica* L.
7. Rodhra- *Symplocosracemosa* Roxb.
14. Dhataki- *Woodfordia fruticosa* (L.) Kurz.
8. Bilvapeshika- *Pulp of Aegle marmelos* (L.) A. Lyons.
9. Katvanga- *Oroxylum indicum* (L.) Benth. Ex Kurz.
10. Kamalodbhava raja- *Nelumbo nucifera* Gaertn.

There are 10 drugs mentioned in this group.

Doshaghna Karma: Pittahara

Bheshaja Karma: Sandhaneeya, Vranaropana

Rogaghna Karma: Pakwaatisara, Vrana.

29. मुस्तादि गण

मुस्तावचाग्निद्विनिशाद्वितिक्ताभल्लातपाठात्रिफलाविषाख्याः ।
कुष्ठं त्रुटी हैमवती च योनि स्तन्यामयघ्ना मलपाचनाश्च ॥ (A.H.Su 15/40)

1. Musta- *Cyperus rotundus* L.
2. Vacha- *Acorus calamus* L.
3. Agni/Chitraka- *Plumbago zeylanica* L.
   Dwinisha- Haridra & Daruharidra
4. Haridra- *Curcuma longa* L.
5. Daruharidra- *Berberis aristata* DC.
6. Tikta/Katuki- *Picrorrhiza kurroa* Royle ex Benth.

7. Bhallataka- *Semecarpus anacardium* L.f.
8. Patha- *Cissampelos pareira* L.
   Triphala- Haritaki, Amalaki & Vibhitaki
9. Haritaki- *Terminalia chebula* Retz.
10. Amalaki- *Emblica officinalis* Gaertn.
11. Vibhitaki- *Terminalia bellerica* (Geartn.) Roxb.
12. Visha/Vatsanabha- *Aconitum ferox* Wall. Ex Ser.
13. Kushta- *Saussurea lappa* C.B Clarke
14. Truti/Ela- *Elattaria cardamomum* (L.) Maton
15. Haimavati- *Acorus calamus* L.

There are 15 drugs mentioned in this group.

Bheshaja Karma: Malapachana

Rogaghna Karma: Yoniroga, Stanyaroga

30. न्यग्रोधादि गण

न्यग्रोधपिप्पलसदाफलरोध्रयुग्मं जम्बूद्वयार्जुनकपीतनसोमवल्काः ।
प्लक्षाम्रवञ्जलप्रियालपलाशनन्दीकोलीकदम्बविरलामधुकं मधूकम् ॥
न्यग्रोधादि गणो व्रण्यः सङ्ग्राही भग्नसाधनः ।मेदः पित्तास्रतृड्दाहयोनिरोगनिबर्हणः ॥ (A.H.Su 15/41-42)

1. Nyagrodha- *Ficus bengalensis* L.
2. Pippala- *Ficus religiosa* L.
3. Sadaphala- *Ficus racemosa* L.
4. Rodhra- *Symplcos racemosa* Roxb.
5. Shabararodhra- *Symplocos crategoides* Buch.-Ham. Ex D. Don
   Jambudwaya- Raja Jambu & Kaka Jambu
6. Raja Jambu- *Syzygium jambos*
7. Kaka jambu- *Syzygium jambolana*
8. Arjuna- *Terminalia arjuna* (Roxb.) Wight &Arn.
9. Kapeetana- *Ficus macrocarpa* L.f.
10. Somavalka/Khadira- *Acacia catechu* (L.) Willd., Oilv.
11. Plaksha- *Ficus lacor* Buch.-Ham
12. Amra- *Mangifera indica* L.
13. Vanjula/Vetasa- *Salix caprea* L.

14. Priyala- *Buchanania lanzan* Spreng.
15. Palasha- *Butea monosperma* (Lam.) Taub.
16. Nandi- *Ficus retusa* L.
17. Kola- *Zizyphus jujuba* Mill.
18. Kadamba- *Anthocephalus cadamba* (Roxb.) Miq.
19. Virala/Tinduka- *Diospyros malabarica* (Desr.) Kostel.
20. Madhuka- *Glycyrrhiza glabra* L.
21. Madhooka- *Madhuka indica* J. F. Gmel

There are 21 drugs mentioned in this group.

Doshaghna Karma: Pittahara

Bheshaja Karma: Sangrahi

Rogaghna Karma: Bhagna, Medoroga, Raktapitta, Trishna, Daha, Yoniroga

31. एलादि गण

एलायुग्मतुरुष्ककुष्ठफलिनीमांसीजलध्यामकं स्पृक्काचोरकचोचपत्रतगरस्थौणेयजातीरसाः ।
शुक्तिर्व्याघ्रनखोऽमराह्वगुरुः श्रीवासकः कुङ्मं चण्डागुग्गुलुदेवधूपखपुराः पुन्नागनागाह्वयम् ॥
एलादिको वातकफौ विषं च विनियच्छति । वर्णप्रसादनः कण्डूपिटिकाकोठनाशनः ॥(A.H.Su 15/43-44)

1. Sookshma Ela- *Elattaria cardamomum* (L.) Maton
2. Sthula Ela- *Amomum subulatum* Roxb.
3. Turushka- *Liquidamber orientalis* Mill.
4. Kushta- *Saussurea lappa* C.B Clarke
5. Phalini- *Callicarpa macrophylla* Vahl.
6. Mamsi/Jatamansi- *Nardostachys jatamansi* (D.Don) DC.
7. Jala/Sugandhabala- *Coleus vettiveroides* K.C Jacob
8. Dhyamaka/Gandhatrina- *Cymbopogon martini* (Roxb.) Wats.
9. Sprikka- *Anisomeles malabarica* (L.R.Br. ex Sims. - An aromatic plant of Northern Himalayas.
10. Choraka- *Angelica glauca* Edgew.
11. Chocha- *Cinnamomum zeylanica* Blume.
12. Patra - *Cinnamomum tamala* (Buch.-Ham.) T.Nees & C.H. Eberm.
13. Tagara - *Valeriana wallichi* DC.
14. Sthouneyaka - *Taxus baccata* L.

15. Jati rasa/Bola- *Commiphora myrrha* (Nees) Engl.
16. Shukti/Nakha- *Helix aspera* O. F. Muller.
17. Vyaghranakha- *Capparis sepiaria* L.
18. Amarahwa/Devadaru- *Cedrus deodara* (Roxb.) G. Don
19. Agaru- *Aquillaria agalocha* Lam.
20. Shrivasaka/Sarala- *Pinus roxburghii* Sarg.
21. Kumkuma- *Crocus sativus* L.
22. Chanda- *Angelica glauca* Edgew.
23. Guggulu- *Commiphora mukul* (Stocks) Hook.
24. Devadhupa- *Vateria indica* L.
25. Khapura/Kunduru- *Boswellia serrata* Roxb.
26. Punnaga- *Calophyllum inophyllum* L.
27. Nagahwa/Nagakesara- *Mesua ferrea* L.

There are 27 drugs mentioned in this group.

Doshaghnakarma: Vata-Kaphahara

Bheshajakarma: Varnaprasadana

Roghaghnakarma: Visha, Kandu, Pitika, Kotha

32. श्यामादि गण

श्यामादन्तीद्रवन्तीक्रमुककुटरणाशङ्खिनीचर्मसाह्वा स्वर्णक्षीरीगवाक्षीशिखरिरजनकच्छिन्नरोहाकरञ्जाः ।
वस्तान्त्री व्याधिघातो बहलवहुरसक्षणवृक्षात् फलानि ।
श्यामाद्यो हन्ति गुल्मं विषमरुचिकफौ हृद्रुजं मूत्रकृच्छ्रम् ॥ (A.H.Su 15/45)

1. Shyama (Black variety of Trivrit)- *Operculinaturpethum* (L.) Silva Manso
2. Danti- *Baliospermum montanum* Muell.
3. Dravanti- *Jatropha curcus* Linn.
4. Kramuka- *Areca catechu* L.
5. Katurana/Trivrit- *Operculina turpethum* (L.) Silva Manso
6. Shankhini- *Clitoriaternatea* L.
7. Charmasahva- *Acacia sinuata* (Lour.) Merr.
8. Swarnakshiri- *Argemone mexicana* L.
9. Gavakshi/Indravaruni- *Citrullus colocynthis* (L.) Schrad.
10. Shikhari/Apamarga- *Achyranthes aspera* L.

11. Rajanaka/Kampillaka- *Mallotus philippinensis* (Lam.) Muell. Arg.
12. Chinnaruha- *Tinospora cordifolia* (Thunb.) Miers.
13. Karanja- *Pongamia pinnata* (L.) Pierre.
14. Bastantri- *Argeria speciosa* (Burm.f.) Bojer.
15. Vyadhighata/Aragwadha- *Cassia fistula* L.
16. Bahala/Shigru- *Moringa oleifera* Lam.
17. Bahurasa/Ikshu- *Saccharum officinarum* L.
18. Teekshnavriksha/Peelu- *Salvadora persica* L.

There are 18 drugs mentioned in this group.

Doshaghna Karma: Kaphahara

Rogaghna Karma: Gulma, Visha, Aruchi, Hridruja and Mutrakricchra

H. Classification based on potency (Veerya):

Based on the veerya (potency), the Dravyas are classified into two groups:

1. Sheeta Veerya Dravya (cold potency): Chandana, Usheera etc.
2. Ushna Veerya Dravya (hot potency): Agaru, Kushta etc.

Further details about the concept of Veerya or Potency property will be discussed in the 6th chapter.

One more classification of veerya as per Chakrapanidatta is –

तत्राप्यौषधद्रव्यं त्रिविधं वीर्य भेदात् तीक्ष्ण वीर्य यथा शुण्ठ्यादि, मध्यवीर्य बिल्वाग्निमन्थादि, मृदुवीर्यझामलकादि । (Chakrapani Commentary on C.S.Sa 2/17)

1. Teekshna Veerya Dravya (sharp): Shunthi (*Zingiber officinale* Roscoe).
2. Madhyama Veerya Dravya (moderate): Bilva (*Aegle marmelos* (L.) Correa) Agnimantha (*Clerodendrum phlomidis* L.f).
3. Mridu Veerya Dravya (mild): Amalaki (*Emblica officinalis* Gaertn)

I. Classification based on post digestive effect (vipaka):

Based on the end product formed during the process of digestion of Dravya, they are classified into three types:

1. Madhura Vipaka Dravya, Eg..- Gokshura, Amalaki
2. Amla Vipaka Dravya, Eg..- Nimbuka, Changeri
3. Katu Vipaka Dravya, Eg..- Hingu, Ela

Further details about the concept of Vipaka or metabolic property will be discussed in the 5th chapter.

2.3. Glossary

To summarize the chapter here are the few important points –

- Dravya is one of the six Padarthas accepted by Ayurveda.
- Dravya is an entity with an inseparable (Samavaya) relationship with the attributes of quality and action.
- Among the six categories (Shadpadartha), Dravya is essential to understand the existence of the other five Padarthas.
- All the Dravyas in the universe are made up of Panchamahabhutas including our body. Hence, the Dravyas or substance are useful for treatment.
- During the formation of Garbha, the cell division takes place due to Vayu Mahabhuta, Agni Mahabhuta is responsible for cellular metabolism, Jala Mahabhuta does the nourishment by giving moisture, Prithvi Mahabhuta is responsible for solidity and Akasha Mahabuta for expansion.
- In the body, these Mahabhutas are expressed in terms of Doshas, Dhatus and Malas while in Ahara and Aushadha, they are expressed in terms of Rasas, Guna, Veerya and Vipaka.
- Dravyas (Ahara and Aushadha) are the cause of sthana (maintenance), vriddhi (increase) and kshaya (decrease) of the doshas in the living body because of similarity in the composition. The action of the substance is understood on the basis of Samanya-Vishesha Siddhanta where, the Dravyas with the similar qualities tend to increase while the dissimilar qualities tend to decrease of the body components.
- Dravya classifications are tabulated below:

Dravyabheda	Types
Utpatti (origin)	1. Parthiva 2. Apya 3. Taijasa 4. Vayaviya 5. Akashiya.
Yoni (source)	6. Jangama 7. Oudbhida 8. Parthiva.

Prayoga (Therapeutic application)	1. Ahara Dravya 2. Aushadha Dravya
Prabhava (Effect)	1. Dosha prashamana Dravya 2. Dhatu pradushana 3. Swasthavruttakara
Doshaghnabheda (Effect on doshas)	a. Shamana Dravya b. Kopana Dravya c. Swasthahita Dravya
Rasa bheda (taste)	d. Madhuraskandha e. Amlaskandha f. Lavanaskandha g. Katuskandha h. Tiktaskandha i. Kashayaskandha
Karma bheda (Pharmacological action)	1. Charakokta 50 mahakashayas 2. Sushrutokta Gana 3. Shadhanadigana of Astanga Hridaya

2.4. EXERCISE

Long Essay:

1. Write the Nirukti, Lakshana, Panchabhoutikatva and Vargeekarana of Dravya in detail.
2. Define Dravya, write the classifications of Dravya. What are the contributions of Sushruta and Vagbhata in it?

Short Essay:

1. Write the lakshana and panchabhoutikatwa of Dravya.
2. Explain 'sarvam dravyam panchabhoutikamasminnarthe'.
3. Define Dravya. Write its lakshana and explain panchabhoutikatva.
4. Define Dravya. Write Dravyavargeekarana.
5. Write definition of Dravya. Write classification of Dravya according to yoni bheda and Prabhava bheda.

6. Write a brief note on Sushruta's classification of Dravya mentioned in Dravya sangrahaneeya adhyaya.

Short Answers:

1. Write classification of Dravya according to Utpattibheda.
2. Write classification of Dravya according to Yonibheda.
3. Write classification of Dravya according to Prabhavabheda.
4. Write classification of Dravya according to Rasaskandha.
5. Define Dravya.
6. Write a note on Swasthahita Dravyas.

Multiple Choice Questions

1. Types of Dravya according Rasabheda
   a. 3 b. 4 c. 6 d. None
2. Types of Dravya according to Doshakarma
   a. 2 b. 3 c. Both 1 & 2 d. None
3. Dose of Ahara Dravya is .... Pala
   a. 4 b. 3 c. 16 d. Both 1 & 2
4. According to Sushruta, which drug is not included in Brihatydi Gana
   a. Brihati b. Kutaja c. Patha d. Mridweeka
5. .... नाम्ना गण: श्लेष्मनिषूदन: । Fill in the blank according to Sushruta.
   a. Guduchyadi b. Mustadi c. Amalkyadi d. Nyagrodhadi
6. Gana of Musta as per Sushruta
   a. Balya b. Vachadi c. Kasahara d. Pippalyadi
7. As per Ashtanga Hridaya, what is the action of Arkadigana?
   a. Vranashodhana b. Yonidoshahara
   c. Pakwatisaranashanou d. Dushtavranavishodhana
8. Kapikacchu belongs to which Gana according to Sushruta
   a. Vidarigandhadi b. Kaphasamshamana
   c. Amalakyadi d. None of the above
9. Following gana is used in yoniroga
   a. Trina panchamula b. Trikatu
   c. Panchavalkala d. Trijata

10. Shwadamshtrais included in which Gana of Sushruta
   a. Vidarigandhadi   b. Rodhradi
   c. Kashaya skandha   d. Vata samshamana

Answer Key

1 c	2 b	3 a	4 d	5 b	6 b	7 a	8 a	9 c	10 a

Bibliography

1. Agnivesha (1998). Charaka Samhita (Vol 1-2). Redacted by Charaka: Hindi commentary by Kashinatha Shastri, Gorakhanatha Chaturvedi: Rajeshwaradatta Shastri, Yadunandana Upadhaya, Ganga SahayaPandeya, Banarasidasa Gupta (eds), Varanasi. Chaukhambha Bharati Academy.
2. Sushruta (1997). Sushruta Samhita (11th ed., Vol 1-2). Hindi commentary Ayurveda tattva sandipika by Ambikadutta Shastri, Varanasi. Chaukhambha Sanskrit Sansthan.
3. Vagbhata (1997). Astanga Hridaya (12th ed.). Hindi commentary Vidyotini by Atrideva Gupta: Yadunandana Upadhyaya (ed.),Varanasi. Chaukhambha Sanskrit Sansthan.
4. Vidyanath. R (2013), Astanga Hridaya of Vagbhata, Sutra Sthana text with English translation, Chaukhamba Surbharati prakashan.
5. Sharma P. V. (2009). Dravyaguna Vignyana Volume 1& 2, Chaukhambha Bharati Academy Varanasi.
6. Shastry J.L.N., Nesari M. Tanuja. (2019). A text book of Dravyaguna Vijnana (Reprint., Vol 1-2). Varanasi. Chaukhambha Orientalia.
7. Deshapande Manasi Makarand (2004), Dravyagunavijnana Prathama khanda, Chaukhamba Sanskrit Pratishtan, Delhi
8. Chunekar Krishnachandra (2005), A textbook of Dravyaguna vijnana, Prathama bhaga, Chaukhamba Surbharati Prakashana, Varanasi.
9. Mishra Yogesh Chandra (2011), Padartha Vijnana Basic principles of Ayurveda, Chaukhambha Sanskrit Sansthan, Varanasi.

CHAPTER NO.: 3

CONCEPT OF GUNA

Dr. Mahesh T. S.

Objectives of the Chapter

1. **Define Guna & describe its Panchabhautikatwa.**
2. **State Characteristics of Gurvadi Guna**
3. **Discus Gurvadiguna in context to its Karma on Dosha, Dhatu and Mala with example**
4. **Enlist Paradiguna with examples**
5. **Interpret Clinical applications of Paradiguna**
6. **Discuss research updates of Paradiguna**

Topics in the Chapter

1. **Panchabhoutikatva, characteristics and classification.**
2. **Gurvadiguna and its karma on Dosha, Dhatu and Mala, clinical application and research updates.**
3. **Paradiguna with examples, clinical applications and research updates.**

Introduction

The chapter is dealing with the various dimensions and aspects of the properties concerning a drug and its relevance to the activities that the substance exhibits when it interacts with the living organism. The whole chapter is in three sections as per the latest NCISM syllabus namely

1. Panchabhuatikatwa, characteristics and classification.
2. Guruvadiguna and its karma on Dosha, Dhatu and Mala, clinical application and research updates
3. Paradiguna with examples, clinical applications and research updates.

   Basically, the concept is derived from the various philosophies more specifically, the Shad Darshanas where it is enumerated as one among the Shad Padartha. In the philosophies or Darshana, this is said as a single entity

which was further amplified into five different concepts namely Rasa, Guna, Veerya, Vipaka and Prabhava. This was done for better illustrating and understanding of the actions that were produced by the substances that interact with the living organism including humans. It is these five Gunas or properties of the substance that are known as Panchalaxana of Dravya.

द्रव्यमाश्रयलक्षणम्पञ्चानाम्। (R.S.1/66)

Still the basic character of all these properties fulfill the criteria of attracting the world around towards the substance, aiding for recognition of the substance and also aid in the understanding of the substance.

- गुण्यते आमन्त्र्यते लोके अनेन इति गुणाः । (Word derivation/ निरुक्ति)

It is these five properties or Guna that form the basis of Pharmacodynamics and Pharmacokinetics of Ayurveda by being the cause for the process of combination and separation which is totally known as action or Karma.

- द्रव्याश्रय्यगुणवान् संयोगविभागेष्वकारणमनपेक्ष इति गुणलक्षणम् । (Vaisheshika Darshana)

Even though the Panchalaxana are the different manifestations of Guna itself, it forms one of the entity in the list. The present chapter will be dedicated to this property which is named as GUNA and by itself is the parent concept of the others.

In Ayurveda too this is one among the shadpadartha as mentioned in the classical texts like Charaka Samhita.

सामान्यं च विशेषं च गुणान् द्रव्याणि कर्म च ।। समावायं च तज्ज्ञात्वा तन्त्रोक्तं विधिमास्थिताः।

(C.S.Su.1/28-29)

This is thus further defined in the context of Shadpadartha as the component of the substance which is in always present in the substance and is in an irrevocable relationship with it.

Definition of Guna

- समवायी तु निश्चेष्टः कारणं गुणः । (C.S.Su.1/51)

The definition also emphasizes that even though Guna is an independent entity it doesn't have the ability of performing or exhibiting the activities on its own. Hence it is always dependent on the substance for exhibiting the activities also. In turn it forms the identity of the substance which helps one to understand and recognize the substance as well. Another definition with a similar meaning but also emphasizes that the Guna is that aspect present in the substance which is not having any character of its own (as it is by itself a characteristic feature) nor has the ability to perform any activity by itself.

अथ द्रव्याश्रिता ज्ञेयः निर्गुणा निष्क्रिया गुणाः । (Karikavali)

3.1. Panchamahabhutikatva Characteristics and Classification

Panchamahabhutikatva of Guna

As per the Panchamahabuta siddhanta, all the substances in the universe is made up of the 5 Mahabhutas which means that every substance should have been the same.

सर्व द्रव्यं पञ्चभौतिकमित्यस्मिन्नर्थे तच्चेतनावदचेतनञ्च । (C.S.Su 26/10)

But it is not so because the composition of the Mahabhuta is in different proportions leading to variations in the substances. The predominance levels of these Mahabhutas in the combination pertaining to different degrees gives rise to variations both physically and chemically leading to diverse substances in the universe. The presence of variation of the proportions of mahabhutas not only give their physical existence but also bring about variations in their properties or Gunas in particular. All the 5 Mahabhutas are attributed with different properties and related actions on their own as mentioned in the padartha vignyana texts. The details as illustrated in the table below: (table no. 1).

Name of the Mahabhuta	Properties attributed
Akasha	शब्द, संख्या, परिमाण, पृथक्त्व, संयोग & विभाग
Vayu	स्पर्श, संख्या, परिमाण, पृथक्त्व, संयोग, विभाग, परत्व, अपरत्व & संस्कार (वेग)
Agni	रूप, स्पर्श, संख्या, परिमाण, पृथक्त्व, संयोग, विभाग, परत्व, अपरत्व, द्रवत्व & संस्कार
Jala	रूप, रस, स्नेह, स्पर्श, संख्या, परिमाण, पृथक्त्व, संयोग, विभाग, परत्व, अपरत्व, गुरुत्व, द्रवत्व & संस्कार
Prithvi	रूप, रस, गन्ध, स्पर्श, संख्या, परिमाण, पृथक्त्व, संयोग, विभाग, परत्व, अपरत्व, गुरुत्व, द्रवत्व & संस्कार

Table No. 1 Properties & Actions of individual Mahabhutas

Based on the predominant Mahabhuta in the Karyadravyas these are bifurcated into five groups by Acharya Charaka which is based on the characteristic features or properties as illustrated in the table below. (Table No. 2).

तत्र द्रव्याणि गुरुखरकठिणमन्दस्थिरविशदसान्द्रस्थूलगन्धगुणबहुलानि पार्थिवानि तान्युपचयसंघातगौरवस्थैर्यकराणि;द्रवस्निग्धशीतमन्दमृदुपिच्छिलरसगुणबहुलान्याप्यानि तान्युपक्लेदस्नेहबन्धविष्यन्दमार्दवप्रह्लादकराणि;उष्णतीक्ष्णसूक्ष्मलघुरूक्षविशदरूपगुणबहुलान्याग्नेयानि तानि दाहपाकप्रभाप्रकाशवर्णकराणि;लघुशीतरूक्षखरविशदसूक्ष्मस्पर्शगुणबहुलानि वायव्यानि तानि रौक्ष्यग्लानिविचारवैशद्यलाघवकराणि;मृदुलघुसूक्ष्मश्लक्ष्णशब्दगुणबहुलन्याकाशात्मकानि तानि मार्दवशौषिर्य्यलाघवकराणि ।। (C.S.Su.26/11)

Name of the Mahabhuta	General Properties	Special Property
Akasha	मृदु लघु सूक्ष्म & श्लक्ष्ण	शब्द
Vayu	लघु शीत, रूक्ष, खर, विशद & सूक्ष्म	स्पर्श
Agni	उष्ण, तीक्ष्ण, सूक्ष्म, लघु रूक्ष & विशद	रूप
Jala	द्रव, स्निग्ध, शीत, मन्द, मृदु & पिच्छिल	रस
Prithvi	गुरु, खर, कठिण, मन्द, स्थिर, विशद, सान्द्र & स्थूल	गन्ध

Table No. 2 Properties & Actions of individual substances that are classified based on the predominant Mahabhutas.

Thus, the properties that are seen in these substances which are generated by the Mahabhutas themselves become the properties of the substance. These properties further aid in the physical identification and chemical interaction with others bringing out various actions. If there are no interactions between the substances then the action will not be executed even when the substance is in possession of the property. Thus, the concept of Panchamahabhuta principle is actually the base for the concept of Guna as well. But other than these there are properties that are not attributed to the five mahabhutas as well. These are comparatively less or not of much importance from the Dravyaguna perspective.

Classification of Guna

The total number of properties that are enumerated in Charaka Samhita is 41 in total. In comparison to other philosophies, this is the maximum number of properties enumerated. These are further classified into groups based on the commonality of its activities or effects on living subjects especially humans. The properties or Guna is classified (Figure No.1) elaborately in Charaka Samhita which is further clarified by the commentary of Chakrapani (Agnivesha (2002). Vol 1. p. 61).

सार्था गुर्वादयो वुद्धिः प्रयत्नान्ता परादयः । गुणाः प्रोक्ताः ....।। (C.S.Su.1/49)

अनेन त्रिविध अपि वैशेपिकाः सामान्या आत्मगुणाश्चोद्दिष्टाः ।

(Commentary of Chakrapani on the quote c.s.su.1/49)

Accordingly, the properties or Guna is basically of 3 types namely:

1. Samanya Guna – 30
2. Vishishita Guna – 5
3. Adhyatmika Guna – 6

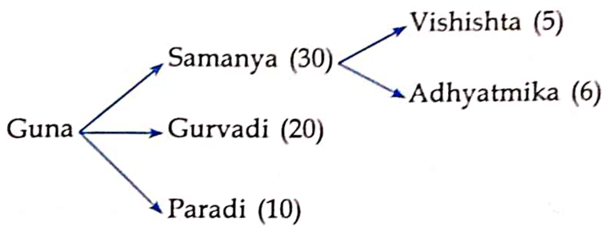


Figure No.1 Classification of Guna

The classification is based on the reference from Charaka Samhita that depicts this classification. Among the three, the first two make the materialistic properties which is appreciated physically while the last group is more towards non-physical related to the higher functions of mind and intellect. It is to be observed that the Vishishtaguna is not mentioned under samanyaguna group as they are the specific properties of the Mahabhuta which when perceived shows the presence of the relative Mahabhuta itself. Further, the commentator of Chakrapani clarifies that the AdhyatmaGunas or AtmaGunas are actually 10 in number which is mentioned in the shareerasthana of the text. Among the 10 only 6 are mentioned while enumerating the Adhyatmika Guna.

Samanya Guna

The Samanya Guna or the common properties are those that have their applications in every field of activities. The activities include our interaction with the substance like the chemical and physical interactions along with different transactional interactions that help in proper execution of treatment planning. Moreover, these properties are those that are generally seen in the panchamahabhutas as the common or general properties. Hence the group is named as Samanya Guna.

एते च सामान्यगुणाः पृथिव्यादीनां साधारणत्वात् । (Commentary of Chakrapani on the quote C.S. Su.1/49)

It is this set of properties that are highly relevant and deeply associated with the subject of Dravyaguna and hence need to be understood in detail. This group is further classified into two parts as mentioned by Chakrapani they are Gurvadi (20) and Paradi (10) Guna. It is this group of properties that are highly useful in the practice and understanding of Ayurveda which forms the main part of Guna in the subject Dravyaguna.

एते च यज्जःपुरुपीये प्राय आयुर्वेदोपयुक्तात्वात् परादिम्यः पृथक् पठितः । (Chakrapani'sCommentary on the quote c.s.su.1/49)

Gurvadi Guna

The group of properties that are extensively associated with interactions of the substance with the living organism both physically and chemically is the set known by the name Gurvadi Guna. It is named so as the first property that is mentioned in the set or group is Guru guna. The group is also known through different names as Vimshati Guna, Vipareeta Guna, Dvandva Guna, Shareerika Guna and Bhoutika Gunas also. The group consists of 20 properties in total which gives its name as Vimshati Guna.

गुरुमन्दहिमस्निग्धश्लक्ष्णसान्द्रमृदुस्थिराः । गुणाः ससूक्ष्मविशदा विंशतिः सविपर्ययाः ।। (A.H.Su.1/18)

The same reference also highlights that the set of properties are 10 with the other 10 being the opposite, thus making the total number as 20 in the form of 10 pairs of opposites. This feature of the group will makes it to be named as Vipareeta Guna. This feature has also resulted in naming the group as Dvandvaguna. The name shareerikaguna is given to the group by Charaka while enumerating the properties that belong to the group. It is named so as the said properties are having their direct influences on the bodily components resulting in bringing out variations.

तत्रेमे शरीरधातुगुणाः संख्यासामर्थ्यकराः तद्यथा गुरुलघुशीतोष्णस्निग्धरूक्षमन्दतीक्ष्णस्थिरसरमृदुकठिन विशदपिच्छिलश्लक्ष्णखरसूक्ष्मसान्द्रद्रवाः । (C.S.Sha.6/10)

As it is commonly seen in the Mahabhuta, the set of properties are also known as Samanyaguna. As it is associated closely with the five Mahabhutas, this set of properties can also be called as the Bhautikaguna also. Finally, Nagarjuna has named this group as Karmanyaguna because it is the one that have considerable role in the manifestation of different actions within the body that may be for curing the disease or even maintenance of health.

शीतोष्ण स्निग्ध रूक्ष विशदपिच्छिल गुरु लघु मृदु तीक्ष्ण गुणाः कर्मण्याः ।। (Rasavaisheshika Sutra)

Irrespective of its name, it is evident that it is this set of properties are those which bring about the different variations within the body through the medium of food and lifestyle that we are exposed to. The variations bring about the conditions of disease and health as per their proportions present in the body which can be managed back to its hemostasis condition through the use of medications, food and lifestyle when it is used with due consideration to these properties itself.

तेषु ये गुरवस्ते गुरुभिराहारविकारगुणैरभ्यस्यमानैराप्यायन्ते लघवश्च ह्रसन्ति, लघवस्तु लघुभिराप्याय्यन्ते गुरवश्च ह्रसन्ति। एवमेव सर्वधातुगुणानां सामान्ययोगाद् वृद्धिः विपर्ययाद्ह्रासः।। (C.S.Sha.6/10)

The action that leads to these changes can be understood and applied with the principle of Samanya and Vishesha in particular to obtain the objectives of treatment.

As illustrated earlier, there are 20 different properties belonging to this group which are **Guru, Laghu, Manda, Teekshna, Sheeta, Ushna, Snigdha, Ruksha, Shlakshna, Khara, Sandra, Drava, Mridu, Katina, Sthira, Sara, Sukshmaand Sthula.** The present enumeration is as per the text Vagbhata while the composition of this group has been slightly different with respect to different authors

Notably Acharya Sushruta is of the opinion that the properties Manda, Mridu and Shlakshna are said to be the opposites for Sara, Teekshna and Karkasha respectively. Along with this he has further included Sugandha and Ashukari as opposite to Durgandha and Vyavayi along with the 20 properties. Further, Acharya Nagarjuna is of the opinion that Mridu is opposite to Teekshna and have further included Durgandha, Sugandha, Ashukari, Vyavayi and Vikasi into the list of the properties like Acharya Sushruta. Finally, Acharya Bhavamishra, has only changed the arrangement of opposites namely Teekshna, Mridu, Drava and Manda are having the opposites properties as Shlakshna, Karkasha, Shushka and Ashu respectively. Even though there is difference in enumeration and inclusion of the properties in the list, all the scholars have maintained that the number of properties to be included in the group is only 20. This is because all these different properties are being integrated into the different ones among the 20 properties itself. The summary of the Gunas mentioned under Gurvadi Gunas by different authors are as below:

Charaka	Sushruta	Vagbhata	Nagarjuna	Bhavamishra
Sha. 6/10	Su. 45/518	A.S. Su.1/38-39 A.H.Su.1/18	Rasavaisheshika Su. 111	Purvardha 6/201
Guru x Laghu	Guru x Laghu	Guru x Laghu	Guru x Laghu	Guru x Laghu
Manda x Teekshna	Mridu x Teekshna	Manda x Teekshna	Manda x Teekshna	Manda x Teekshna
Sheeta x Ushna	Sheeta x Ushna	Sheeta x Ushna	Sheeta x Ushna	Sheeta x Ushna
Snigdha x Ruksha	Snigdha x Ruksha	Snigdha x Ruksha	Snigdha x Ruksha	Snigdha x Ruksha

Shlakshna x Khara	Shlakshna x Karkasha	Shlakshna x Khara	-	Shlakshna x Karkasha
Sandra x Drava	Sandra x Drava	Sandra x Drava	Sandra x Drava	Shushka x Drava
Mridu x Kathina		Mridu x Kathina	-	
Sthira x Sara	Manda x Sara	Sthira x Sara	-	Sthira x Sara
Sukshma x Sthula	Sukshma x Sthula	Sukshma x Sthula	-	Sukshma x Sthula
Vishada x Picchila	Vishada x Picchila	Vishada x Picchila	Vishada x Picchila	Vishada x Picchila
-	Sugandha x Durgandha	-	-	-
-	Vyavayi	Vyavayi	-	-
-	Vikasi	Vikasi	-	-
-	Ashukari	-	-	Ashu

Paradi Guna

परापरत्वे युक्तिश्च संख्या संयोगेव च । विभागश्च पृथक्त्वं च परिमाणमथापि च ।।
संस्कारऽभ्यासमित्येते गुणाः प्रोक्ता परादयः । सिद्‌दिरुपाय चिकित्साया लक्षणैस्तान् प्रचक्ष्महे ।।
(C.S.Su.26/29-30)

This set of properties are also included under the Samanya guna due to its regular occurrence in our routine activities. These are also associated with the 5 Mahabhutas (Table No. 1) which makes it to be included in the group of Samanya guna along with the Gurvadi Gunas. The utility of these set of properties is for the proper planning and execution of the different treatment modalities in various diseases to attain the objective of the treatment in an efficient way. These are 10 in number namely Para, Apara, Yukti, Sankhya, Samyoga, Vibhaga, Prithaktwa, Parimana, Samskara and Abhyasa.

Vishishta Guna

महाभूतानि खं वायुर्ग्रेरापः क्षितिस्तथा । शब्दः स्पर्शश्च रूपं च रसो गन्धश्च तद्‌गुणाः ।। (C.S.Sha.1/27)

एते च वैशेषिकाः यतः आकाशस्यैव शब्दः, प्राधान्येन, वायोरेव स्पर्शः प्राधान्येन, एवमन्यादिपु रूपादयः।
(Chakrapani Commentary on C.S.Su.1/49)

The vishishta guna are the special and innate property of the Mahabhutas. Infact it is that property which is present in the most micro level of Mahabhuta that are present in the purest form. These Mahabhutas are situated in the respective Indriya (Jnanendriya – sense organs) due to which they are able to perceive the objects predominant with the respective.

गुणाः शरीरे गुणिनां निर्दिष्टाश्चिह्नमेव च । अर्थाः शब्दयो ज्ञेया गोचरा विपया गुणाः ।। (C.S.Sha.1/31)

As the Mahabhutas are five in number, these properties too are 5 in number. They are Shabda, Sparsha, Rupa, Rasa and Gandha. These are related to Akasha, Vayu, Agni, Jala and Pritvi Mahabhuta respectively. The perception of these organs will result in the relative Buddhi or knowledge and its relative manifestation in mind or Manasa buddhi.

या यदिन्द्रियमाश्रित्य जन्तोर्बुद्धिः प्रवर्तते । याति या तेन निर्देशं मनसा च मनोभवा ।। (C.S.Sha.1/32)

It is these three that are closely associated with the 5 Mahabhutas which make them to be considered as Adibhautika guna in total whereas the Adhyatmika gunas are those which are associated with the Atma making it an abstract and non-materialistic.

Adhyatmika Guna

The non-materialistic properties or Adhyatmika guna are those that are manifested in Atma which is a reservior of knowledge. But the manifestation is only due to the interaction between Manas, Indriya and Indriyartha.

आत्मेन्द्रियमनोऽर्थानामेकैका सन्निकर्षजा ।। (C.S.Sha.1/33)

Even though there are 10 properties mentioned for Atma as the linga or characters for the presence of Atma, only 6 are being enlisted in the context namely Buddhi, Iccha, Dwesha, Sukha, Dukha and Prayatna.

इच्छाद्वेषः सुखं दुःखं प्रयत्नश्चेतना धृतिः । वुद्धिः स्मृतिरहंकारो लिङ्गानि परमात्मनः ।। (C.S.Sha.1/72)

Further Chakrapani clarifies that among this 10, the properties namely Buddhi, Jnyana, Smriti, Ahankara and Chetana is represented by Buddhi while being enumerated along with the remaining five, thus, making it as a group of 6 properties.

अनेन च स्मृति-चेतन-धृत्यहंकारादीनां वुद्धिविशेपाणां ग्रहणम् । चेतनादीनां वुद्धिग्रहणेनैव ग्रहणम् ।
(Chakrapani's commentary on C.S.Su.1/49)

3.2. Gurvadiguna and its Karma on Dosha, Dhatu and Mala, Clinical Application and Research Updates

The Gurvadi guna or the Vimshati guna as described earlier consists of 10 pairs of opposite properties making it to be a total of 20 properties. It is these which interact with our body components resulting in variations in them

पञ्चभूतात्मके देहे आहारः पाञ्चभौतिकः । विपाकः पञ्चधा सम्यक् गुणान् स्वानभिवर्द्धयेत् ।। (S.S.Su.46/533)

It is these variations that determine the health and disease status in the body. As these have the ability to interact, these properties can be considered to be representing 2 planes namely the physical and the chemical plane. The physical plane of substance is known as the physical properties while the chemical plane of properties are the chemical properties. Both have the same names attributed but their activities and interactions differ. Hence understanding of its action on the Dosha, Dhatu and Mala is very much necessary to get an idea of their application clinically. The details of each are described in the successive pages of the chapter.

Guru Guna (Heavy)

The property that makes the substance to be pulled down towards earth or positive geotropic is known as Guru Guna.

गुरुत्वं जलभूम्योः पतनकारणम् । (Commentary of Prashasthapada)

The property is also explained as the one that will result in the Brimhana or Pushti or nourishment along with the substance having this property taking time for getting digested.

यस्य द्रव्यस्य बृंहणे कर्मणि शक्तिः स गुरुः । (Hemadri Commentary on A.H.Su.1/18)

गुरुर्वातहरः पुष्टिश्लेकृत् चिरपाकी चा । (Bhavaprakasha Purvardha 6/203)

सादोपलेप बलकृत् गुरुस्तर्पण बृंहणः । (S.S.Su.46/525)

Thus the Guru guna is understood in the following way:

a. Commonly known name– heavy

b. Panchamahabhuta Composition– Prithvi & Jala Mahabhuta; Mainly Prithvi Mahabhuta

c. Physical property associated– Heavy by weight or mass that makes the substance fall towards the earth.

d. Chemical property associated– Takes a longer duration for digestion.

e. General action or Karma– Provides nutrition, decreases appetite due to delay in digestion (Chirapaki), increase bulkiness (Brimhana), produce letharge (Sada), increase strength (Balakara) and makes one contented (Tarpana).

f. Action on Dosha– Vatahara, Kaphakara.

g. Action on Dhatu– Increase the bulkiness of the Dhatu as the composition of the body and the composition of the body components are nearly the same i.e., Jala and Prithvi. Hence this property will lead to increase in nourishment or Brimhana effect.

h. Action on Mala– As it increases bulkiness in every aspect, even the Mala or excreta is increased in bulkiness (Upalepa). As the property tends to be perform Upalepa it is also causes deposition in the srotas that may result in the blocks or Srotorodha.

i. Clinical Application– The substance with Guru guna is very much appreciated for its ability to give nutrition and also strength. But this is possible only when it is properly digested. As it takes a long duration of time for digestion, clinically when this is administered without understanding the condition of appetite (Agni), this may produce harmful effect of further increase in Mandagni (Loss of appetite). Hence, it is important that one should evaluate the condition of Agni when the substance with Guru guna is given internally. Even the level of guru guna depends on the predominance of the Mahabhuta in the substance. If Prithvi is the predominant mahabhuta, then the substance is very difficult to digest or may even be undigested like the collagen fibres in leafy vegetables. While the predominant mahabhuta is Jala, then the substance is comparatively digested easily even though not as quick as the substances present with the dominance of other Mahabhutas like Draksha. In either of the cases there will be increase in the bulkiness of the excreta. Even the nature of bulkiness may differ depending on the predominant mahabhuta where the Jala predominant may increase bulkiness by the increase of Rasa, Rakta, Meda dhatu while the Prithvi predominant may increase bulkiness by the increase of Asthi dhatu. In the balances state of predominance with respect to both the mahabhuta the mamsa, majja and shukra dhatu may increase.

j. Research Updates– A study on the assessment of guru guna of Kapha Dosha was conducted and published by Dr. Niharika Sharma et. al. through questionnaires which were developed on the basis of different classical text references of Ayurveda.

Laghu Guna (Light/Bouyant)

The property that makes the substance to fly or move away from the earth surface or Negative geotropic is known as Laghu Guna.

अग्निवायू हि लघुत्वाच्च तान्यूर्ध्वमुत्तिष्ठन्तिः । (S.S.Su. 41/10)

The property is explained to produce the action of Langhana or makes one starve in general along with other actions that are opposite to that of Guru guna. It also results in slimming or depleting the body tissues (Lekhana) and facilities healing (Ropana). Due to the influence of the property, the substances will get digested quickly (Shigrapaki).

लङ्घने लघुः । (Hemadri Commentary on A.H.Su.1/18)

लघु पथ्यं परं प्रोक्तं कफघ्नं शीघ्रपाकि च । (Bhavaprakasha Purvardha 6/202)

लघुस्तद्विपरीतः स्याल्लेखनो रोपणस्तथा । (S.S.Su.46/525)

Thus, the Laghuguna is understood in the following way:

a. Commonly known name– Light or Bouyant
b. Panchamahabhuta Composition– Akasha, Vayu & Agni Mahabhuta; Mainly Akasha Mahabhuta.
c. Physical property associated– Light by weight or mass that makes the substance fly or float before falling on the earth.
d. Chemical property associated– Gets digested in short duration of time.
e. General action or Karma– It is easily digestible and is wholesome to the body (Pathya), reduces nutrition, increase appetite due to quick digestion (Shigrapaki), decrease bulkiness (Laghava), promotes alertness (Chaitanya), doesn't contribute to strength (Bala kshaya) and may result in resentment (Apatarpana). Other than these actions that are opposite to Guru, it will also initiate the action of slimming or depleting the body tissues (Lekhana) and facilitates healing (Ropana).
f. Action on Dosha– Kapha hara and Vatakara.
g. Action on Dhatu– Decrease in the bulkiness of the Dhatu as the mahabhutas increase the appetite leading to increase in metabolism and lesser supply of nutrition to the body. Hence this property will lead to slimming of body due to lack of nourishment or Karshana effect.
h. Action on Mala– As it promotes quicker metabolism and lesser nutrition leading to reduction of bulkiness in every aspect, even the output of Mala or excreta is leading to dryness. This may also result in the decrease of the Upalepa or deposition leading to clearness of srotas or Srotoshodhana. Hence it is known to be wholesome to the body or Pathya.

i. Clinical Application– The substance with Laghu guna is very much appreciated for its ability to give lightness to the body and alertness to mind. It is also one of the leading property that is considered during the treatment of disease conditions. Even though the nourishment by the substances predominant with this property is low, they form the important source of instant energy during the disease states as they are easily digestible even though the appetite and digestive capacity is low. But in normalcy, when the appetite and digestive capacity (Agni) is normal, then this property will be quickly digested leading to more craving or low nourishment. Hence, it is important that one should evaluate the condition of Agni when the substance with Laghu guna is given internally. Even the level of Laghu guna depends on the predominance of the Mahabhuta in the substance. If substance predominant with Akasha Mahabhuta like puffed rice (Laja) is administered, then the substance being very fragile and will be digested quickly in comparison to those that are dominated by other two. Moreover, it may not alter the appetite or digestion status in the body. When substances that are predominant with Vayu Mahabhuta like green gram (Mudga) is administered, then it will considerably take a bit longer duration than the Akashiya Dravya and may tend to increase in appetite or craving for food. Even they may have some amount of nourishment compared to Akashiya and Agneya substances that are quickly disbursed and used by the body. Lastly, if the substance is predominant with Agni Mahabhuta like pepper (Maricha), it may result in quicker digestion like that of Akashiya dravya but may also result in the increase of appetite or craving for food. It may also result in the irritation when the food is not provided to satisfy the appetite leading to development of different related diseases. But in any case the nutrition provided will be lower than the body requirement. In either of the cases there will be slimming of the body and also may result in conditions like constipation due to loss bulkiness in excreta.
j. Research Updates – Physicochemical and Phytochemical analysis of Guru and Laghu guna dravya wsr to Aushadiya Dravya was conducted and published by Dr.Mrunal Akre et. al. different physico and phytochemical analysis. The study found that the tests that measure Atomic weight, Glycemic index and Protein content were useful in determination of Guru and Laghu guna of the test dravya namely Shatavari and Kushmanda:

Manda Guna (Dull/Sluggish)

The property of the substance results in reducing the intensity of activites in the body when used is known as Manda.

........मन्दो यात्राकरः स्मृतः । (S.S.Su.46/429)

The property is also explained as the one that will result in Shamana or pacifying. It is also said to be having the affect of slowing or delaying of activity within the body leading to increase the duration of a reaction to a notable extent than it normally takes to process.

यस्य द्रव्यस्य शमने शक्तिः स मन्दः । (Hemadri Commentary on A.H.Su.1/18)

चिरकारित्वात् मन्दत्वम् । (A.D.3/2/23)

मन्दः सकलकार्येषु शिथिलोऽल्पोऽपि जायते । (Bhavaprakasha Purvardha 6/211)

Thus, the Manda guna is understood in the following way:

a. Commonly known name– Dull/Sluggish
b. Panchamahabhuta Composition– Prithvi & Jala Mahabhuta
   धरणीसलिलवृत्तिः। (A.D.3/2/24)
c. Physical property associated– Substance that exhibit sluggish or delaye movement. Even a delayed physical response or utmost resistance to act can also be considered as Manda guna.
d. Chemical property associated– Delays the interactions or activities within the body including digestion of the substance too.
e. General action or Karma– The property reduces the intensity of the reactions thereby delaying the pathogenesis of the disease such that it relieves the symptoms for a particular duration or produces a palliative effect (Shithila). It is also useful in pacifying Doshas, by making it less reactive thereby disturbing the pathogenesis of the disease (Shamana) resulting in cure also.
f. Action on Dosha– Vatahara, Kaphakara.
g. Action on Dhatu– The ability of the property to reduce activities will lead to slow processing of Dhatu and hence may lead to accumulation of the components. But as it is having the Prithvi and Jala Mahabhuta, it tends to be nutritive that may lead to increase in bulkiness of the Dhatus.
h. Action on Mala– Owing to the slowing of activity, the formation of Mala will also be affected that may lead to constipation (malabaddhata). There may be no bulkiness of the Mala or excreta will be less as the formation is delayed. This process may lead to stagnation of Mala in the srotas leading to blocks or Srotorodha.
i. Clinical Application– The substance with Mandaguna is very much appreciated for its ability to pacify the activity of the dosha in the body. The main action being the ability to delay the process or reactivity, the substance will take a long duration of time for digestion, clinically when this is administered it may be helpful in bringing down the reactions that are involved in the pathological process. This will give the body enough time to react and heal thereby giving relief from the symptoms. At times even when the disease is of low intensity, it can completely overcome by pacifying the components like Doshas involved in the process thereby resulting in cure (Shamana) of the disease. The level of guru guna depends on the predominance of the Mahabhuta in the substance. When substances that are the predominant Mahabhuta is Pritvi like Kutaja is administered, then the substance can result in overpowering the process thereby leading to pacification of the disease. These susbstances also have the ability to block secretions in the body thereby making the reactions to be controlled. Similarly when the substance like Guduchi or Shali is administered, which is predominant with Jala Mahabhuta, will lead to slowing down of the reactions or processes thereby giving the palliative (Shithila) effect of the disease process. This delays the effect of the disease which makes the pacification of symptoms giving a slight relief. Hence a very careful selection of the substance is necessary for obtaining the desired effect.
j. Research Updates– A review research paper with the title Manda and Teekshna Guna– A critical appriasal authored Dr. Bharadwaj Vikas et. al. has detailed review on the substances of Manda and Teekshna guna.

Teekshna Guna (Sharp/Penetrating)

The property of the substance that makes it to act quickly or accelerate the different activities in the body is Teekshna guna.

शीघ्रकारित्वम् तीक्ष्णत्वम् । (A.D.3/2/25)

It is this property that makes the substance reach into deeper areas of the body such that it can remove the lodged vitiated doshas in the region. This action is known as Shodhana.

शोधने तीक्ष्णः । (Hemadri Commentary on A.H.Su.1/18)

दाहपाककरस्तीक्ष्णः स्रावणो ....। (S.S.Su.46/525)

तीक्ष्णं पित्तकरं प्रायोलेखनं कफवातहृत् । (Bhavaprakasha Purvardha 6/204)

The property can be understood in the following way:

a. Commonly known name – Sharp or penetrating
b. Panchamahabhuta Composition– Agni Mahabhuta
   तेजोवृत्तिः । (A.D.3/2/26)
c. Physical property associated– Sharpness that can cut or penetrate through the given surface that may or may not result in an injury.

d. Chemical property associated– Ability to stimulate the interactions or reactions in the body leading to irritation and acceleration of changes in the region.

e. General action or Karma– Increases reaction and penetrate into the tissues leading to increased reaction (Paka), irritation (Daha) and as a result cause precipitation (Sravana).

f. Action on Dosha– Pittakara, Kaphahara and Vatahara.

g. Action on Dhatu– Due to the ability to cause irritation or penetration (Daha) leads to increase in precipitation (Srava) due to initiation or acceleration of reactions (Paka) in the body components leading to decrease in their bulkiness and weight also.

h. Action on Mala– As there is increase in reaction within the body, the precipitation is also increased and hence the excreta or mala is easily excreted. It is this ability of the property that are used to perform the Vamana (Therapeutic vomitting) and Virechana (Therapeutic purgation) is possible.

i. Clinical Application– The substance with Teekshna guna is very much appreciated for its ability to penetrate into the body. Many fast acting substances that are used as medicaments are having this property predominantly. As it has the ability to react quickly and also accelerate it, the drugs with this property will enhance the process of digestion, increase the different secretions in the body leading more energy consumption and craving for the same. Thus, the substances get easily digested and also will be able to cause stimulation of appetite (Agni). Here the mahabhuta predominant to bring about this property is Agni Mahabhuta itself. The substances like Bhallataka, Chitraka, Maricha, Lanka, etc are having this property. It is due to their nature, they are very much vulnerable to produce adverse reactions or hypersensitivity in the body. Hence, substances with this property are both highly useful but when used injudiciously have the ability to cause harmful effects or damages to body tissues.

j. Research Updates– A review research paper with the title Manda and Teekshna Guna - A critical appraisal authored Dr. Bharadwaj Vikas et. al. has detailed review on the substances of Manda and Teekshna guna.

Sheeta Guna (Cold)

The property of the substance that makes it have a lower heat content or lack thermal energy within them is known as Sheeta Guna.

दाहनाशकत्वं शीतत्वम् । (A.D.3/2/10)

Thus, when comes in contact with the objects around it, it tends to lower their

temperatures from the surrounding making it cold to touch The property is also explained as the one that will result in Styptic action or Stambhana. It is also said to be instrumental in reduction of irritation (Daha), stop or reduce precipitation and other aspects like thirst (Trit) and Unconcious (Murcha) along with producing pleasentness (Hladana).

स्तम्भनो हिमः । (Hemadri Commentary on A.H.Su.1/18)

ह्लादनः स्तम्भनः शीतो मूर्च्छातृट्स्वेददाहजित् । (S.S.Su.46/522)

शीतस्तु ह्लादनः स्तम्भी मूर्च्छातृट्स्वेददाह नुत् । (Bhavaprakasha Purvardha 6/208)

Thus, the property is understood in the following way:

a. Commonly known name – Cold

b. Panchamahabhuta Composition – Jala, Prithvi and Vayu Mahabhuta; Mainly Jala Mahabhuta while the other two will at times attain Ushna when associated with Agni. Hence, they are also said to be Anushna sheeta.

सलिलानिलधरालमोवृत्तिः । (A.D.3/2/11)

अनुष्णशीतः पृथिवी वायोः । (Tarka Sangraha)

c. Physical property associated– the substance will be exhibiting cold on touch

d. Chemical property associated– will be able to reduce the temperature or heat in the body along with a soothening effect (Hladana) due to reduction of irritation.

e. General action or Karma– Decreases the irritation (Daha), reduce or block precipitation (Stambhana), absorb heat thus providing relief from heat and promote pleasentness (Hladana) and provide relief from Thirst (Trit) and Unconsciousness (Murcha).

f. Action on Dosha– Vatakara, Kaphakara and Pittahara.

g. Action on Dhatu– The property reduces the heat in the body thereby resulting in the decrease of reactions and their related precipitations. This inturn will conserve energy in the body resulting in the increase of the Dhatu.

h. Action on Mala– Basically it will increase the output of Urine or Mutrala and reduces the output of Excreta or Mala and Sweat or Sweda.

i. Clinical Application– The substance with Sheeta guna is very much appreciated for its ability to reduce irritation (Daha) and their related conditions. It provides pleasant feeling and relieves the precipitation which can be understood by reduced sweat from the body. The main action being stambhana or styptic property. The substances that are possessing the Sheeta guna can be of Jala, Vayu and Prithvi Mahabhuta predominant which produce dif-

ferent actions. If predominant with Jala mahabhuta like draksha, the action of sheeta will be reducing irritation or Daha leading to an indirect effect of stambhana. If predominant with Vayu Mahabhuta like Nimba, the action of sheeta is resulted due to the the constriction of the srotas which decreases the output of precipitation leading to stambhana. Finally, if predominant with Prithvi Mahabhuta like Kutaja will lead to blocking of pathway which leads to complete stoppage of output resulting in stambhana. Hence, it is very important to understand the properties and the substance that is being administered for a given condition.

j. Research Updates– A study on the assessment of ushna and sheeta guna based on its pharmacological study was published by Dr. Santosh Mane et. al. which analysed the properties through the parameter of change in body weight but had unsatisfactory results obtained.

Ushna Guna (Hot)

The property that makes the substance to have a higher heat content resulting in radiation of heat towards the surrounding is known as Ushna Guna. It is that quality of the substance that results in the increase of body temperature.

दाहजनकत्वमुष्णत्वम् । (A.D.3/2/14)

The property is also explained as the one that will result in the sweating or Swedana. It will also cause irritation that results in burning sensation (Daha) when comes in contact with the body.

स्वेदने उष्णः । (Hemadri Commentary on A.H.Su.1/18)

उष्णस्तद्विपरीतः स्यात् पाचनश्च विशेषतः । (S.S.Su.46/522)

उष्णो भवति शीतस्य विपरीतश्च पाचनः । (Bhavaprakasha Purvardha 6/208)

Thus the property is understood in the following way:

a. Commonly known name– hot
b. Panchamahabhuta Composition – Agni Mahabhuta

   तेजसमौष्ण्यं तैक्ष्ण्यं च । (Rasavaisheshika Sutra 3/113)
c. Physical property associated– Heat sensation or when it irritates the skin on touch.
d. Chemical property associated– Interact with body and increase irritation inside the body causing discomfort and a feeling of burning leading to profuse precipitation.
e. General action or Karma– Cause irritation (Daha), increase secretions (Swedana), cause Thirst (Trit) and even unconsciousness (Murcha) along with stimulation of digestion (Pachana).

f. Action on Dosha– Pittakara and Vata-kaphahara.
g. Action on Dhatu– This will increase metabolism leading to enhanced use of energy. Hence, it decreases Dhatu and may even lead to bleeding due to over irritation.
h. Action on Mala– As it supplements heat to the body and causes irritation of the surface, the substance will result in increased precipitation leading to increased output of Sweat (Sweda) and Excreta (Mala) while may decrease urine (Mutra) output or may become highly concentrated.
i. Clinical Application– The substance with Ushna guna is very much appreciated for its ability to radiate heat. As heat causes extensive excitation, the substance will surely increase precipitation within the body. This inturn leads to increased secretions initially leading to an instant rise of appetite, increased digestion and better absorption. But when given in excess the same substance can cause inflammation and cause bleeding or ulcerations or other similar adverse effects. Thus, it can be understood as the one that stimulates digestion initially that may be beneficial but later will cause depletion due to increased metabolism. Here the mahabhuta predominant to bring about this property is Agni Mahabhuta itself. The substances like Bhallataka, Chitraka, Maricha, Lanka, etc are having this property are very much vulnerable to produce adverse reactions or hypersensitivity in the body. Hence, substances with this property are highly useful but when used injudiciously have the ability to cause harmful effects or damages to body tissues.
j. Research Updates– A study on the assessment of ushna and sheeta guna based on its pharmacological study was published by Dr. Santosh Mane et. al. which analysed the properties through the parameter of change in body weight but had unsatisfactory results obtained.

Snigdha Guna (Oily/Unctous)

The property of the substance that makes it give out moisture or humidity (Kleda) to the one that comes in contact with it is Snigdha guna. The property is also associated with the soft, oiliness of surface, moisture and boost the body colour too.

यस्य क्लेदने शक्तिः स स्निग्धः । (Hemadri Commentary on A.H.Su.1/18)

स्नेहमार्दवकृत् स्निग्धो वलवर्णकरस्तथा । (S.S.Su. 46/523)

स्निग्धं वातहरं श्लेष्मकारि वृष्यं वलावहम् । (Bhavaprakasha Purvardha 6/203)

Thus the Snigdha guna is understood in the following way:

a. Commonly known name– Oily or Unctous

b. Panchamahabhuta Composition– Jala Mahabhuta

स्नेहोऽपां विशेषगुणः । संग्रहमृजादि हेतुः। (Prashasthapada Commentary)

c. Physical property associated– Oiliness or unctousness.

d. Chemical property associated– imparts moisture to the body or substance (Kleda) that comes in contact with it.

e. General action or Karma– provides or enhance moisture of the body (Kleda/ Snigdha kara), Softens the body (Mardava), boost body colour (Varnakara) and also strength (Balakara).

f. Action on Dosha– Vatahara, Kaphakara.

g. Action on Dhatu– Increase the strength (Balakara) of the Dhatu and also its moisture (Kleda). It also gives nourishment to dhatus especially Shukra Dhatu (Vrishya) and increase the varna or colour of body.

h. Action on Mala– With respect to Mala, the property being the one that provide kledana or moisture, it lubricates the srotas leading to easy evacuation of excreta or Mala.

i. Clinical Application– The substance with Snigdha guna like Taila or Ghrita is useful in the enhancement of moisture of the body. The property being the main one manifested by Jala Mahabhuta, which has the important action of Binding (Bandhana) attributed to itself. Hence the use of substances with this property will result in binding of body tissues thereby making it strong, smooth and soft. But when the same is taken in excess will lead to the problems like more moisture in the body and its related disease conditions too. It is to be noted that this property is the basis for snehana karma done as a purva karma or pre-operative procedure to Panchakarma therapies.

j. Research Updates– a study Snigdha and Ruksa Guna with special reference to Rasa-raktagata Sneha (hyperlipidemia)was conducted and published by Dr. Sangram Mishra through a clinical study which showed that the ruksha guna was treated effectively with snigdha guna drugs by applying the concept of snigdha and ruksha guna as per the texts of Ayurveda.

Ruksha Guna (Dry)

The property of the substance that makes it remove moisture or cause dryness is known as Ruksha guna. The property which is responsible to make the surface rough (Khara) and cause blockage (Stambhana).

शोषणे रूक्षः । (Hemadri Commentary on A.H.Su.1/18)

रूक्षस्तद्विपरीतः स्याद्विशेषात् स्तम्भनः खरः । (S.S.Su.46/523)

रूक्षं समीरणकरं परं कफहरं मतम् । (Bhavaprakasha Purvardha 6/203)

Thus the Ruksha guna is understood in the following way:

a. Commonly known name– Dry

b. Panchamahabhuta Composition– Agni, Prithvi & Vayu mahabhuta; Mainly Vayu Mahabhuta.

रौक्ष्य वैशद्य पार्थिव वायव्ये । (Rasavaisheshika Sutra 30/14)

c. Physical property associated– that makes something Dry on contact or absorb moisture.

d. Chemical property associated– absorption or removal of moisture.

e. General action or Karma– the action that is opposite to that of Snigdha guna like decrease in strength (Bala), removes moisture (Shoshana), induce cracks making the surface rough (Khara) and blocking of pathways (Stambhana).

f. Action on Dosha– Vatakara, Kaphahara.

g. Action on Dhatu– Basically it reduces moisture, hence loosens the tissues (Dhatukshaya), decrease strength (Balakshaya) and drys them. It results in roughness or cracks (Khara) which facilitates accumulation leading to blockage (Stambhana).

h. Action on Mala– As the property basically results in Shoshana (removal/ absorption) of moisture leading to dryness of body lumen. This makes the excreta or mala diffent to move resulting in decrese of excreta or Mala.

i. Clinical Application– The substance with Ruksha guna like Maricha, Jambu, Shunti, etc has wide applications like Sneha. This is usually used for removing or reducing moisture. Hence, it is commonly employed in conditions where the moisture is the most like Obesity, common cold, etc. But again, the ruksha is manifested mainly by Vayu Mahabhuta. Substances that are predominant with Vayu mahabhuta like Yava result in decrease of Kapha dosha leading to general loosening of body and loss of weight. But when substances predominant with Agni mahabhuta like Maricha, Shunti, etc. which also causes dryness and is accompanied with irritation. As a result, these substances have the risk of causing rupture and bleeding. On the other hand when Prithvi predominant substances like Jambu are given will absorb moisture and cause intense dryness almost immediately as they tend to absorb all secretions.

j. Research Updates– a study Snigdha and Ruksa Guna with special reference to Rasa-raktagata Sneha (hyperlipidemia)was conducted and published by Dr. Sangram Mishra et. al. through a clinical study which showed that the ruksha guna was treated effectively with snigdha guna drugs by applying the concept of snigdha and ruksha guna as per the texts of Ayurveda.

Shlakshna Guna (Smooth)

The property of the substance that makes it have a smooth surface is known as Shlakshna Guna. The property is also explained as the one that will result in the healing or Ropana by Hemadri but Sushruta is of the opinion that it is having the actions similar to that of Picchila property resulting in Ropana as Picchila property facilitates binding of the components of the body.

श्लक्ष्णो स्नेहं विनाऽपि स्यात् कठिनोऽपि चिक्कणः । (Bhavaprakasha Purvardha 6/206)

अपरूपत्वम श्लक्षणत्वम् । (A.D.3/2/41)

रोपणे श्लक्ष्णः । (Hemadri Commentary on A.H.Su.1/18)

श्लक्ष्णः पिच्छिलवत् ज्ञेयः। (S.S.Su.46/527)

श्लक्ष्णो गुणः पिच्छिलवत् ज्ञेयः । जीवनः श्लेष्मसन्धानकृदित्यर्थः । (Dalhana Commentary)

Thus the Shlaksha guna is understood in the following way:

a. Commonly known name– Smooth
b. Panchamahabhuta Composition– As per Charaka it is Akasha Mahabhuta and Nagarjuna it is Agni Mahabhuta.

   तेजसं श्लक्षणत्वं नामा । (Rasavaisheshika Sutra 1/58)
c. Physical property associated– Smooth surface but without any moisture or stickiness along with hard texture.
d. Chemical property associated– It facilitates healing quickly by interaction with body components.
e. General action or Karma– Increase body tissues (Dhatu vardhaka), heals the dhatu (Ropana) and except moisture or stickiness all the actions similar to Picchila.
f. Action on Dosha– Vatahara, Pittavardhaka and Kaphavardhaka.
g. Action on Dhatu– The property quickens healing action thus leading to increase in binding of the Dhatu like Picchila, making it stronger.
h. Action on Mala– As the surface of the srotas are smoothened, the property will facilitate easy evacuation of excreta or Mala and all other metabolic wastes in the body through their respective routes of excretion (Mala pravartaka).
i. Clinical Application– The substance with the property shlakshna like gem stones is usually supposed to be hard due to which polishing of its surface is possible upon which the property gets exhibited. Hence, these substances will be usually accompanied with the property of hardness too. But when properly processed, these can be very useful medication too. Even plants like Asana wood and Shaka or teak wood is useful medicinally too but with optimum use. The property is said to be generated by either Agni or Akasha Mahabhuta as opined by the respective authors above. If the substances are dominated by Agni mahabhuta like Vajra, then it will facilitate healing but may have to be processed suitably such that it doesn't cause any adverse effect. But when the substances that are dominated with Akasha mahabhuta like Shireesha are much safe for use as they will not be having serious adverse effects.
j. Research Updates– A review study to develop a model for the assessment of Shlakshna guna was conducted and published by Dr Swati N Khandale- where a scoring pattern was devised for assessment that would be useful to assess the property.

Khara Guna (Rough)

The property that makes the substance have a rough surface is known as Khara Guna. The property is also explained as the one that will facilitate the action of Lekhana or scrapping or exhibits all the action that are quite similar to that of Vishada property like absorption of moisture. Sushruta has mentioned Karkasha as an equivalent property opposite to Shlakshna.

परूषत्वं खरत्वम् । (A.D.3/2/43)

लेखने खरः । (Hemadri Commentary on A.H.Su.1/18)

कर्कशो विशदो यथा । (S.S.Su.46/527)

Thus the Khara guna is understood in the following way:

a. Commonly known name– Rough
b. Panchamahabhuta Composition– Vayu, Prithvi or Agni; Mainly Vayu Mahabhuta.

   कर्कशत्वं वायव्यः । (Rasavaisheshika Sutra 3/2/60)
c. Physical property associated– Roughness of surfaces.
d. Chemical property associated– Excessive absorption of water by the substance.
e. General action or Karma– able to clear adhesions, absorbs moisture (Kleda achushana), and has the ability to facilitate healing (Ropana) but doesn't do the action on its own. It is also said to have Scrapping action (Lekhana).
f. Action on Dosha– Vatakara.
g. Action on Dhatu– The property will cause considerable depletion of the dhatu due to its action of Scrapping (Lekhana).

h. Action on Mala- With respect to Mala or excreta, as the substance absorbs moisture, it leads to dryness (Shoshana) of excreta or Mala. Thus the proper expulsion of Mala is difficult due to the effect of the property.

i. Clinical Application- The substance with Khara/Karkasha Guna is very much appreciated for its ability to remove moisture (Shoshana). Here physically it is due to the roughness in the surface of the substance that allows to scrap or even remove the sticking material (Lekhana). Chemically it is mainly due to the ability to absorb moisture leading to dryness of the surface with which it is interacting. It is to be noted that the removal of moisture is a prerequisite condition to facilitate healing process. Hence, the healing process of a substance with Khara/Karkasha is different from that of Shlakshna where the healing is due to the ability to make the surface smooth and binding. Like other properties, even this is resulted due to Vayu, Prithvi or Agni guna. Even though there is a mention of three Mahabhuta, it is to be understood that the three have their own abilities to bring out the said effects. Externally the Prithvi mahabhuta substance that has rough surface like Parijata leaf is useful used for the purpose of scrapping (Lekhana) where the physical material is very much useful. Internally, it is Vayu and Prithvi together or Vayu like Godhuma or Yava alone will be producing this activity. The property is basically resulted due to the absorption of moisture which is primarily necessary to bind different parts. The absorption causes discontinuation leading to roughness at the region. Finally, Agni mahabhuta dominant substances like Maricha, Kulatha which also has the ability to dry the moisture leads to the formation of roughness too. But as always when giving Agni predominant substances care should be ensured to avoid any adverse effects

j. Research Updates- A review on the Gurvadi guna which included Khara gunawas done by Dr. Akanksha Gangawar from various references regarding the different causes that lead to the vitiation of Doshas and then diseases.

Sandra Guna (Turbid)

The property that makes the substance to be solid or turbid is known as Sandra Guna. The property is explained as the one that will result in the Prasadana or calm or gratifying in nature or even nourishing in action along with ability to bind. Bhavamishra has replaced Sushka in place of Sandra as an opposite to Drava guna while explaining the 20 Gurvadi gunas. Dalhana in his commentary on Sandra has mentioned that the Shushka at times causes binding action (Bandhakaraka) by removing the excessive liquid.

यस्य प्रसादने शक्तिः स सान्द्रः । (Hemadri Commentary on A.H.Su.1/18)

सान्द्रः स्थूलः स्याद्बन्धकारकः । (S.S.Su.46/527)

बन्धकारका उपचयकारक इत्यर्थः । (Dalhana Commentary)

द्रव प्रक्लेदनो व्यापी शुष्कः स्याद्बन्ध कारकः इति केचित् पठन्ति । शुष्को गुणः बन्धकारकः शुष्कस्य शोषणत्वेना - वयवापृथक्त्वमित्यर्थः । (Dalhana Commentary)

Thus the Sandra guna is understood in the following way:

a. Commonly known name- Turbid

b. Panchamahabhuta Composition- Prithvi, Vayu and Agni Mahabhuta; Mainly Prithvi Mahabhuta.

c. Physical property associated- The substance is either solid or turbid in appearence.

d. Chemical property associated- They are thick and slow in reaction causing slow interactions

e. General action or Karma- Thick in consistency (Sthula) and is helpful in the process of binding (Bandha). It is also useful in providing contentment or calming or gratifying type of feeling (Prasadana).

f. Action on Dosha- Kaphakara, Vatahara.

g. Action on Dhatu- Increase the Dhatu, binds it together and solidifies them.

h. Action on Mala- It will result in solidifying of the excreta or mala. This will prevent it from being evacuated easily.

i. Clinical Application- The substance with Sandra guna is very much appreciated for its ability to bind the body components, making them strong and compact. It also reduces the movement of the Mala or metabolic wastes as it slows down the interactions or reactions in the body. Thus, it decreases the use of energy as a result of which the nutrition is stored in the body. It may take a longer duration for digestion, so clinically when this is administered without understanding the condition of appetite (Agni), this may produce harmful effect leading to Sthaulya (Obesity). Hence, it is important that one should evaluate the condition of Agni when the substance with Sandra guna is given internally. As Prithvi is the predominant mahabhuta, the substance like Madhu (Honey) that has this property is very difficult to digest or delayed to get metabolised. As opined by some authors, the property is also seen in Vayu and Agni mahabhuta predominant substances which shows that they may be easily digested in comparison to that of the Prithvi mahabhuta dominant substances. If substances like Ghrita is taken where Agni Mahabhuta is predominant, it will improve appetite in small doses but goes on to inhibit in large doses. While when the predom-

inant mahabhuta is Vayu, then the substance is to be taken as Shushka or dry like Masha (Black gram) leading to strong bound substance which is hard to digest. Thus, the substance with the related Mahabhuta is to be understood from their gunas and actions.

j. Research Updates- A review study on effect of Sandra and Drava guna on the Doshas was published by Dr. Jyothi Devangamath et. al. on the basis of different literature references of Ayurveda.

Drava Guna (Fluidity)

The property that makes the substance to be of very thin consistency or fluid and makes it to flow (Syandana) is known as Drava Guna. The property is also explained to be the one that is responsible for wetting of the surfaces (Prakledana). The property is also responsible for the ability of the substance to spread easily (Vilodana).

द्रवत्वं स्यन्दनकर्मकारणम् । (Commentary of Prashasthapada)

द्रवः प्रक्लेदनः । (S.S.Su.46/527)

यस्य विलोडने शक्तिः स द्रवः । (Hemadri Commentary on A.H.Su.1/18)

द्रवः क्लेदकरो व्यापी........। (Bhavaprakasha Purvardha 6/210)

Thus the drava guna is understood in the following way:

a. Commonly known name- Fluidity
b. Panchamahabhuta Composition- Agni, Prithvi & Jala Mahabhuta; Mainly Jala Mahabhuta

द्रवत्वं स्यन्दने हेतुः निमित्तं संग्रहे तु तत् । (Karikavali)

c. Physical property associated- Ability to flow and spread quickly.
d. Chemical property associated- Ability to spread quickly and reach deeply.
e. General action or Karma- Generally, it produces deep penetration and easy absorption (Vilodana). As a result, it has the ability to make substance wet and is able to dissolve different things in them.
f. Action on Dosha- Kaphakara, Pittavardhaka.
g. Action on Dhatu- It increases those liquid Dhatu which are dominant with Jala mahabhuta like Rasa.
h. Action on Mala- With respect to Mala, it increases those which are fluid in nature like Mutra. It also liquefies the excreta or Mala making it loose and quick for excretion.
i. Clinical Application- The substance with Drava guna like water, milk, butterilk, etc are dominated with Jala Guna. These have the ability to produce all the effects that are attributed to the property. But drava guna is also attributed to Agni and Pritvi Mahabhuta also. This type of association of drava guna is considered as Naimittika or under certain special conditions. The substances dominant with Agni Mahabhuta having Drava guna like that of Bhallataka taila or Tuvaraka taila are very corrosive in action because they can penetrate deeply. The substances dominant with Prithvi Mahabhuta having Drava guna like that of clay or mud solution, sugar syrups, etc which is thick and can dispensed in the body quickly.
j. Research Updates- A review study on effect of Sandra and Drava guna on the Doshas was published by Dr. Jyothi Devangamath et. al. on the basis of different literature references of Ayurveda.

Mridu Guna (Soft/Fragile)

The property that makes the substance soft and fragile nature to it known as Mridu Guna. The property is explained to be responsible for the weaking or fragile or loosening effect (Shlathana) on the body. Sushruta has mentioned this property to be opposite of Teekshna Guna.

यस्य श्लथने शक्तिः स गुरुः ।(Hemadri Commentary on A.H.Su.1/18)

.... मृदुरन्यथा ।(S.S.Su 46/525)

The Mridu guna is understood in the following way:

a. Commonly known name- Soft or Fragile
b. Panchamahabhuta Composition- Akasha and Jala Mahabhuta.

मार्दवमान्तरिक्षमाप्यं च ।(Rasavaisheshika Sutra 3/115)

c. Physical property associated- Soft texture or fragile in nature
d. Chemical property associated- Weakly bound particles within them making it fragile.
e. General action or Karma- Loosens the body and even decrease the strength (Shlathana) of the body parts. Due to the effect the body becomes more sensitive and soft.
f. Action on Dosha- Kaphakara, Vata and Pittahara.
g. Action on Dhatu- Loosens the body tissues and further decrease the different conditions like irritation (Daha), inflammation (Paka) and suppuration (Srava) in the body.
h. Action on Mala- It will also cause loosening of excreta or Mala making it soft and easy for excretion.

i. Clinical Application– The substance with Mridu guna is the one that loosens the body components hence, its increased use will make the individual loose strength and compactness of the body. The substances are dominated by Akasha and Jala Mahabhuta where Akasha mahabhuta makes the substance porous like Charcoal while the Jala Mahabhuta like Taila, Navaneeta, Ghrita, binds substances to give shape and flexibility. A judicious use of the materials with this property can enhance flexibility of the body making it soft but not fragile. While overuse may lead to fragility of body parts and highly sensitive leading to intense reaction even for small stimuli (Sukumara condition).

j. Research Updates– A study on the utility and application of Mrudu guna was published by Dr. Pranauti P Milkhe et. al. and was found to have a vast clinical application.

Kathina Guna (Compact/Rigid)

The property that makes the substance have a hard consistency and rigid is known as Kathina Guna. The property is also explained as the one that will result in the Dridikarana or compact and rigid.

> यस्य दृढीकरणे शक्तिः स कठिणः । (Hemadri Commentary on A.H.Su.1/18)
>
> संघातोऽवयवानाम् काठिन्यम् । (A.D.3/2/34)

Thus the Kathina guna is understood in the following way:

a. Commonly known name– Compact and Rigid
b. Panchamahabhuta Composition– Prithvi Mahabhuta.
c. Physical property associated– The substance is compact and rigid also
d. Chemical property associated– Takes a longer duration for disintegration.
e. General action or Karma– Provides nutrition, makes body strong and rigid (Dridikarana) as a result will provide the much needed strength also due to compactness.
f. Action on Dosha– Vatakara.
g. Action on Dhatu– Increase compactness of the Dhatus or body components.
h. Action on Mala– Due to its nature of providing hard and compact nature, even the excreta or Mala becomes hard and dry which hinders its evacuation.
i. Clinical Application– The Prithvi Mahabhuta dominated property is one that attributes this to the body also. Hence substances which is completely dominated by the property like Pravala, Heeraka, etc has the ability to make the body strong because it binds the body and makes it strong such that it is rigid and has the ability to ward off or counter any stimuli that may harm the body components or the whole body in general.
j. Research Updates– A study on the utility and application of Kathina guna was published by Dr.Pranauti P Milkhe et. al. and was found to have a vast clinical application.

Sthira Guna (Stable/Immobile)

The property that makes the substance to be stable and immobile is known as Sthira Guna. The property is also explained as the one that will result in the Dharana or gives stability or retention or protecting. The property will also be responsible for the stopping or blocking of the movement or evacuation of Vata and excreta or Mala.

> चलरहितत्वम् स्थिरत्वम् । (A.D.3/2/27)
>
> यस्य धारणे शक्तिः स स्थिरः । (Hemadri Commentary of A.H.Su.1/18)
>
> स्थिरो वातमलस्तम्भी । (Bhavaprakasha Purvardha)
>
> केशश्मश्रुलोमास्थिनखदन्तसिरास्नायुशमनीरेतः प्रभृतीनि स्थिराणि । (S.S.Sha.3/31)

Thus the Sthira guna is understood in the following way:

a. Commonly known name– Stable or immobile
b. Panchamahabhuta Composition– Prithvi Mahabhuta
   क्षितिः वृत्तिः । (A.D.3/2/28)
c. Physical property associated– Firmness or stable, difficult to move or change
d. Chemical property associated– Firmness or stable that makes the substance less or non-reactive.
e. General action or Karma– Provides stability to and firmness to the body components and restrict the falling of parts like hairs, mustache, body hairs, nails, bones, teeth, veins, ligaments, arteries and semen.
f. Action on Dosha– Vatahara, Kaphakara.
g. Action on Dhatu– It gives stability to the body components including Dhatu due to which it is also useful in the increase of strength (Balya).
h. Action on Mala– The quality provides stability and resistance to any change resulting in the restriction of the bowel movements. This causes the stambhana or decrease in evacuation of excreta or Mala and even flatus or Vata.
i. Clinical Application– The substance with Sthira guna attribute stability to the body. The Prithvi Mahabhuta dominated property is one that attributes this to the substance and to the body also. Hence substances which is com-

pletely dominated by the property like Shankha, Bala, etc has the ability to make the body strong because it gives additional strength and stability to the body such that it can resist any change by countering the influences that try to bring about the changes in general.

j. Research Updates– A study on the utility and application of Sthira guna was published by Dr.Pranauti P Milkhe et. al. and was found to have a vast clinical application.

Chala Guna (Mobile)

The property thatgives the ability to the substance for making movement is known as Chala Guna. The property is also explained as the one that results in the stimulation to move or Prerana. The property is mentioned as Sara in Bhavaprakasha and Sushruta samhita which is attributed with the action of Pravartana or stimulation.

सर्वतः प्रवृत्तिशीलत्वम् सरत्वम् ।(A.D.3/2/29)

यस्य प्ररणे शक्तिः स चलः ।(Hemadri Commentary on A.H.Su.1/18)

सरस्तेषां प्रवर्तकः ।(Bhavaprakasha Purvardha)

सरोऽनुलोमनः प्रोक्तः ।(S.S.Su.46/525 अनुलोमनो वातमलप्रवर्तनः । Dalhana Commentary)

Thus the Sara or Chala guna is understood in the following way:

a. Commonly known name– Mobile
b. Panchamahabhuta Composition– Jala Mahabhuta
   सलिल वृत्तिः ।(A.D.3/2/30)
c. Physical property associated– Mobility or easily movable.
d. Chemical property associated– Reactive and can bring about the change easily.
e. General action or Karma– The action will help in channelizing the movements through its normal routes or Anulomana (Movement in the direction of body hairs). This aids in easy evacuation of excreta or Mala and flatus or Vata.
f. Action on Dosha– Vatakara.
g. Action on Dhatu– As the property stimulates change and also undergoes change, there will be increase in metabolism resulting in increased use of energy. Hence it results in decrease of Dhatu.
h. Action on Mala– The property aids in the easy evacuation of excreta or Mala and is also useful in the proper movement or evacuation of other metabolites as well.

i. Clinical Application– The substance with Chala or Sara guna like Draksha, Trivrit, Haritaki, etc is mainly predominant with Jala guna which makes it to reach the deepest levels and initiate the changes. Hence it influences the different activities in the body along with aiding the components to maintain its movement in a normal manner. Ironically even though it is caused by the predominance of jala mahabhuta, the use of the property will lead to evacuation thus resulting in Vata Dosha vriddhi due to Dhatu kshaya.

   Movement is also related due to Vayu Mahabhuta. Infact Charaka mentions in Vatakalakaleeya Adhyaya that all the function that involves movement is due to the influence of Vayu itself. Substance that are predominant with Vayu Mahabhuta will influence the movement of the components present in the pathways or channels spread all over the body.

   These substance with act like a catalyst for different reactions that take place in the body. The other Mahabhuta is Agni that exhibits this property. With respect to Agni, the movement is always towards the upper levels (Urdhvamukha). The substances that are predominant with Agni Mahabhuta initiates or propagates reactions leading to movement of energy and their use effectively. It is this Mahabhuta that is responsible for initiating change and hence the substances that are dominant with Agni Mahabhuta are also responsible for enhancement of metabolic changes that occur in the body. It may increase or decrease the nutrition, strength or even growth rate of the body. The effect generally depends on the substance given as a part of the diet or medicines. Thus, its judicious use is always recommended as it has the potency of creating adverse effects too.

j. Research Updates– A study on the utility and application of sara guna was published by Dr. Pranauti P Milkhe et. al. and was found to have a vast clinical application.

Sukshma Guna (Minute/Nano/Micro)

The property that gives the ability to the substance to penetrate into every minute part is known as Sukshma Guna. The property is explained to produce the effect of Vivarana or uncovering or opening. It makes the substance enter and reach every minute part of the body through the srotas or channels.

देहस्य सूक्ष्मछिद्रेषु विशेद्यत् सूक्ष्ममुच्यते । (Bhavaprakasha Purvardha)

यस्य विवरणे शक्तिः स सूक्ष्मः । (Hemadri Commentary on A.H.Su.1/18)

सौक्ष्म्यात् सूक्ष्मस्तु सूक्ष्मेषु स्रोतः स्वनुसरः स्मृतः । (S.S.Su.46/531)

Thus the Sukshma guna is understood in the following way:

a. Commonly known name– Minute or Nano or Micro

b. Panchamahabhuta Composition– Agni, Vayu and Akasha Mahabhuta.

अनलानिलाम्बर तमोवृत्तिः । (A.D.3/2/46)

c. Physical property associated– Ability to become minute or microfine substance

d. Chemical property associated– Ability to disintegrate into fine or nano particles quickly through reactivity.

e. General action or Karma– Enters every part of the body and results in clearing or opening of the pathways (Vivarana) leading to easy movement of the contents in the channels or srotas.

f. Action on Dosha– Vatakara, Kaphahara.

g. Action on Dhatu– Results in opening of channels and easy movement of contents. This makes the draining and reactions of the body much more quicker leading to use of energy and decrease in the Dhatu as well.

h. Action on Mala– As the channels of excretion are clear, the movement of the excreta or Mala and other metabolic wastes are easily evacuated. But the quantity of the wastes will be reduced due to increase in the frequency of evacuation.

i. Clinical Application– The substance with property of Sukshma are those that are highly fragile and get disintegrated quickly which makes it very conducive for them to get dissolved and penetrable. The Mahabhutas responsible for this property being Agni, Vayu and Akasha, these are only beneficial when used judiciously whereas any abuse will lead to adverse effects. If the substance that is dominated with Agni mahabhuta like Sura, Bhallataka, etc they are useful in stimulation of appetite (Agni) to an extent but the same when used in excess will cause burn like injury to the body parts also. If the substance is dominated with Vayu mahabhuta like Madya, Visha, etc, they are also able to stimulate appetite (Agni) but when used in excess will not cause any notable burn like injury. It will over stimulate the body activities causing harm to the body parts in the long run. Finally, if the substances are dominated with Akasha Mahabhuta like Kupeelu, Karaveera will cause the effect of opening the srotas but result in depletion like muscular wasting when used in excess. Thus, the use of these substances are to be used in a very judicious way to have optimum benefits.

j. Research Updates– A review on the Gurvadiguna which included Sukshmaguna was done by Dr. Akanksha Gangawar from various references regarding the different causes that lead to the vitiation of Doshas and then diseases.

Sthula Guna (Bulky/Large)

The property that makes the substance to be bulky or large and resist or delay disintegration is known as Sthula Guna. The property is explained to be having the ability of increasing the mass (Samvarana). The substances with this property tend to get deposited and lead to increase the bulk or quantity of the components associated with it.

प्रसृतावयवत्वं स्थूलत्वम् । (A.D.3/2/47)

यस्य संवरणे शक्तिः स स्थूलः । (Hemadri Commentary on A.H.Su.1/18)

स्थूलः स्थौल्यकरो देहे स्रोतसामवरोधकृत् । (Bhavaprakasha Purvardha 6/209)

Thus the Sthula guna is understood in the following way:

a. Commonly known name– Bulky or Large

b. Panchamahabhuta Composition– Prithvi Mahabhuta.

क्षितिवृत्तिः । (A.D.3/2/48)

c. Physical property associated– Increased mass and occupies space making the substance bulky or large.

d. Chemical property associated– Resists or delays the process of disintegration

e. General action or Karma – Results in the increase of body mass (Sthaulya) or body components leading to blockage of the channels or srotas (Srotorodha).

f. Action on Dosha– Kaphakara, Vata and Pittahara.

g. Action on Dhatu– Increase the bulkiness of Dhatu (Sthaulya) or the individual components by increase of mass.

h. Action on Mala– The mass of the excreta or Mala or metabolic waste is increased in bulk or mass leading to triggering of evacuation process or may block the channels due to increased mass thereby leading to srotorodha.

i. Clinical Application– The substance which is possessing the sthula guna do have large mass and resist to get disintegrated. The Mahabhuta being responsible for the manifestation of this guna is Prithvi and the substances that possess this property like Pravala, Kumari, Karkatashringi, etc which are having the ability to be bulky and resist the process of disintegration. They may result in control of excessive flow (Atipravritti of Srotas) by causing blockage to it. But their excessive use will lead to adverse effects like sthaulya as they may hinder the process of metabolism or atleast digestion.

j. Research Updates– A review on the Gurvadiguna which included Sthulaguna was done by Dr. Akanksha Gangawar (Gangwar A et.al., 2023) from

various references regarding the different causes that lead to the vitiation of Doshas and then diseases.

Vishada Guna (Clear/Non-sticky)

The property the substance which makes the substance to be non-sticky and clear is known as Vishada Guna. The property is also explained as the one that will result in clearness of the surfaces or area with which it comes in contact (Kshalana) or has the ability to absorb moisture (Kledachushana) and healing capability (Ropana).

यस्य क्षालने शक्तिः स विशदः । (Hemadri Commentary on A.H.Su.1/18)

क्लेदच्छेदकरः ख्यातो विशदो व्रणरोपणः । (Bhavaprakasha Purvardha 6/208)

विशदो विपरीतोऽस्मात् क्लेदाचूषणरोपणः । (S.S.Su.46/524)

Thus the Vishada guna is understood in the following way:

a. Commonly known name- Clear or Non-sticky

b. Panchamahabhuta Composition- Prithvi, Vayu, Agni& Akasha Mahabhuta

धरानिलानलवृत्तिः । (A.D.3/2/46)

c. Physical property associated- Have clear and even surface on one or all sides of the object.

d. Chemical property associated- Absorbs moisture and clears the surface.

e. General action or Karma- It absorbs moisture from the surface with which it interacts, helps in the process of healing (Ropana).

f. Action on Dosha- Vatakara, Kaphahara.

g. Action on Dhatu- It only facilitates the healing activity among the Dhatu but absorbs moisture thereby removing the stickiness and producing a Lekhana effect. This causes the decrease in quantity and strength of the Dhatus or body tissues.

h. Action on Mala- Like the Dhatus, even the stickiness of excreta or Mala and metabolic wastes is reduced facilitating easy evacuation through their respective channels.

i. Clinical Application- The substances that possess Vishada Guna are appreciated for their ability to absorb moisture. As a result, it removes stickiness on surfaces or within the substance. The clearness of the wounds are a pre-requisite condition for proper healing of wounds. The Mahabhuta that generate this property are Prithvi, Agni, Akasha and Vayu Mahabhuta which when are only beneficial when used in a proper manner. If the substances that are dominant with Prithvi Mahabhuta like Kutaja, Asana, etc, the substances can absorb moisture and also result in the blockage of the openings that are responsible for secretions, which makes it more useful for the purpose of healing or Ropana. If the substances that are dominant with Agni Mahabhuta like Snuhi, Apamarga, the substances also cause removal of moisture by virtue of drying it and heating the part that interacts leading to clearing effect. But as they are having a corrosive effect, it may cause harm if used injudiciously like burning of tissues. If the substances that are dominant with Vayu mahabhuta like Mudga, Nimba, etc will lead to absorption of moisture and drying. This action facilitates Sliming or lekhana effect and has the ability to cause adverse effect if used injudiciously. Finally, if the substances that are dominant with Akasha mahabhuta like Laja, etc will lead to removal of moisture by absorption and will facilitate Ropana action. But its unjudicious use may hamper the healing process due to splits in the surface as excessive moisture is absorbed.

j. Research Updates- A study on the utility and application of Vishada guna was published by Dr.Pranauti P Milkhe et. al. and was found to have a vast clinical application.

Picchila Guna (Sticky/Slimy)

The property of the substance that makes it stick to other surfaces is known as Picchila Guna. The property is also explained as the one that makes it form a coating (Lepana) on the surface with which it interacts.

यस्य लेपने शक्तिः स पिच्छिलः । (Hemadri Commentary on A.H.Su.1/18)

पिच्छिलत्वमाप्यम् । (Rasavaisheshika Sutra 3/112)

पिच्छिलोजीवनोबल्यःसन्धानःश्लेष्मलोगुरुः। (S.S.Su.46/524)

पिच्छिलस्तन्तुलो बल्यः सन्धानः श्लेष्मो गुरु : ।। (Bhavaprasha Purvardha 6/207)

Thus the Picchila guna is understood in the following way:

a. Commonly known name- Sticky or Sliminess

b. Panchamahabhuta Composition- Jala Mahabhuta.

पिच्छिलत्वमाप्यम् । (Rasavaisheshika Sutra 3/112)

c. Physical property associated- Sticky and threading nature when tried to separate its parts apart.

d. Chemical property associated- Binding of two or more surfaces or forms a layer on the surface that it interacts.

e. General action or Karma- It has the ability to create a coating on the surface which it comes in contact with and supports life (Jeevana), increase strength (Balya) and results in binding (Bandha).

f. Action on Dosha- Vatahara, Kaphakara.

g. Action on Dhatu- It leads to increase of strength in the Dhatu (Balya) and binds them leading to more compact and flexible. The effect will also result in weight or thickness of the dhatu or tissues.

h. Action on Mala- As it increases the sticky nature in the body, the property will lead to stickiness of Mala or excreta or metabolic wastes making it difficult to be evacuated. This will lead to sticking of the Mala in the related channels also.

i. Clinical Application- The substance with Picchila guna is associated to the Jala Mahabhuta. Hence, the substances that are dominant with Jala Mahabhuta like Astishrinkhala, Shleshmataka, sugar, etc are those that can bind parts of the body especially when they are used in a proper proportion leading to the Ropana or healing. Else the stickiness itself will become a hindrance to the effect of healing. Moreover, binding of the body parts are usually necessary to make it compact and increase strength relatively. But again stickiness above the level of necessity will cause blockage of channels or srotas causing diseases. Hence, the optimum use is necessary for having its utmost benefits.

j. Research Updates – A study on the utility and application of Picchila guna was published by Dr.Pranauti P Milkhe et. al. and was found to have a vast clinical application.

3.2.1. Gunas that were mentioned under the group Gurvadi Guna but not enumerated

The properties that were enumerated under Gurvadi Gunas but not mentioned above areShushka,Ashukari, Vyavayi, Vikasi, Sugandha and Durgandha. Shushka is mentioned under the Vishada guna as per the commentary of Dalhana while Ashukari is more of an action that to be considered as Guna as per its definition in Sushruta.

The property Ashukari is described as the ability of the substance to spread itself very quickly into every corner of the body like oil which spreads over water when dropped over it. It is named as Ashu by Bhavaprakasha. This property is being equated to Chala Guna by Hemadri.

आशुकारि तथाशुत्वाद्धावत्यम्भसि तैलवत् । (S.S.Su.46/530)

आशुराशुकरो देहे धावत्यम्भसि तैलवत् । (Bhavaprakasha Purvardha 6/211)

The property Vyavayi and Vikasiis mentioned in the list by both Sushruta and Vagbhata. In the present context, the Vyavayi is said to be the ability of the

substance to spread throughout the body and then undergo metabolism. Vikasi is the ability of the substance to penetrate deep into the body and dislodge the joints. The Vyavayi and Vikashi are the properties that have been incorporated into Teekshna and Sara properties respectively. A detailed description of both is done in the chapter Karma.

व्यवायी देहमखिलं व्याप्य पाकाय कल्पते। विकापी विकषन्नेव सन्धिवन्धान्विमुञ्चति ।।

सरस्तीक्ष्णप्रकर्षौ तु कैश्चित्तौ परिकल्पितौ । (A.S.Su.1/40-41)

It is also mentioned as a type of activity or Karma while enlisting them by Sharangadhara too. Finally the properties Sugandha and Durgandhaare two opposite properties that are part of sense object namely smell wherein even though considered as guna, it is part of the Vishishta guna itself. Hence, these properties even though mentioned under Gurvadi guna by some authors are not considered here because the Gurvadi guna are the materialistic properties which are originated from the five Mahabhutas and are found in every object whether living or non-living. Some scholars do consider it to be a part of Manda and Teekshna Guna respectively.

सुखानुबन्धी सूक्ष्मश्च सुगन्धो रोचनो मृदुः । (S.S.Su.46/528)

दुर्गन्धो विपरीतोऽस्माद् घृल्लासारुचिकारकः । (S.S.Su.46/528)

3.2.2. General Research updates on Gurvadi Gunas

The Gurvadi guna are those set of properties that are very much necessary to understand as they have a direct influence on the components of the body as illustrated in this chapter. They play a very important role in assessing the utility of the substance for the purpose of treating a given condition. A general scientific review paper on the applied aspect of Gurvadi Guna showed that every aspect of treatment like Nidanaparivarjana (Avoidance of the disease-causing factors), Pathayapathya (Dietary regimen), variations in Doshas and the effect of the medications all depend on the Gurvadiguna (Ingle et.al. (2022)) which is inline what the texts have emphasized.

3.3. Paradiguna with Examples, Clinical Applications and Research Updates

The Paradiguna as enumerated earlier are the set of 10 properties which are named under the Samanyaguna itself by Chakrapani. Its detailed knowledge and understanding is very much necessary for the proper planning and implementation of treatment to achieve its objectives. Unlike Gurvadiguna these properties are not having a direct effect on the body components leading to its increase or decrease and cause diseases but they have an indirect effect

through the Gurvadi Gunas itself. Thus, the influence of the properties is on the body indirectly through the Gurvadi Guna itself with judicious application of the properties on the basis of Gurvadi Guna and the condition in the body. Hence Chakrapani quotes it to be less prominent with respect to the treatment as it is the intellect of the physician that is more useful in suitable use of the Paradiguna leading to optimum use of Gurvadi Gunas to treat a given condition. Hence understanding of its influence on the Gurvadiguna to bring out an action on the Dosha, Dhatu and Mala is very much necessary to get an idea of their application clinically.

एते सामान्यगुणाऽपि नात्युपयुक्तत्वात्तथा बुद्धिप्राधान्याच्चान्ते प्रोक्ताः । (Commentary of Chakrapani on c.s.su.26/30)

The details of each are described in the successive pages of the chapter.

Paratva (Favourable/Superior)

The property Paratwa is the ability of being prioritized or becomes a superior aspect leading to be more recognizable (Pradhana). Various factors play their role in determining the substance, property or action to be prioritized. Even the use, availability and accessibility determine an object, property or action is to be given the priority or not.

तच्च परत्वं प्रधानत्वम् । (Commentary of Chakrapani on C.S.Su.26/35)

परत्वं सन्निकृष्टत्वम् उपयोगितायामासन्नत्वम् । (Yogendranatha)

Clinical Application– The utility of the property is in accordance with the next property as well. A substance may be a good in its action, property, etc., but when not available for use, makes it loose its priority. Similarly, an easily available substance that may not be main drug of choice will be chosen. On the other hand when there are more than one choices are present, then the best among them is considered after due evaluation of the patient and the disease (Rogi and Roga pariksha), the best one will be considered for use in treatment. The enlisting of Agrya aushadha by Charaka is on the same purpose so as to have an idea of the best one among the array of substances for a given condition.

Aparatva (Unfavourable/Inferior)

The property which is exactly opposite to Paratva property is Aparatva. Hence, the property is that makes the substance, action or property to be considered as inferior, ignorable, unfavorable or posteriority. It is that property that makes the substance loose its priority which may be due to inaccessibility or non-availability also.

अपरत्वं अप्रधानत्वम् । (Commentary of Chakrapani on C.S.Su.26/33)

Clinical Application– The utility of the property is in accordance with the earlier property as well where even the best substance becomes ignored if its not available. Other than the opposite situations of those mentioned for Paratva, certain properties and mismatches like Viruddha aahara will make the formulation, drug or substance as inferior and hence to be avoided. On the other hand when there are more than one choices are present, then the best among them is considered after due evaluation of the factors like Desha, Kala Mana, Vaya, etc.

देशकालवयोमान पाक वीर्य रसादिषु परापरत्वे । (C.S.Su.26/35)

Thus, the Paratva and Aparatva are the properties that are mutual and is employed when one needs to evaluate the suitability of treatment modality, procedures, plan of treatment, methods of execution and the substances used for the purpose. It is evaluated on the basis of Desha, kala, Vaya, Mana, etc. parameters to understand the suitability. For example the Jangala desha is Para as the diseases caused here is less while Anupa desha is Apara due to high vulnerability to diseases.

Yukti (Logic/Plan)

The property Yukti is the one that stands for planning or plan of treatment (Yojana). The planning of the treatment is based on various factors namely the proper assessment of the Roga or disease and the Rogi or the diseased. This is possible with the help of evaluation methods mentioned for the purpose.

युक्तिस्तु योजना यातु युज्यते । (C.S.Su.26/35)

युक्तिश्चादौ योजना दोषाद्यपेक्षया भेषजस्य समीचीनकल्पना ।

युक्तिश्चेयं संयोगपरिमाणसंस्कारद्यन्तर्गताप्यत्युपयुक्तत्वात् पृथगुच्यते । (Commentary of Chakrapani on c.s.su.26/35)

Clinical Application – Thus the planning of a treatment is initially starts with the evaluation. The evaluation will lead the physician to diagnose the disease and this inturn will be aiding to choose the right treatment methodology. The treatment methods and medicinal formulations to be used for treatment is based on the Doshas, etc that are involved in the disease process. A planning is without a logical reasoning is to be considered as the worst situation than depriving one from any medicine. Hence when a proper planning is done the physician has to carefully evaluate the formulation, combinations, doses and processes that is involved while preparing the formulation.

Samkhya (Numbers)

The numbers that are used for the purpose of counting is known as Sankhya. As a property of the substance or entity, it is the ability of the substance or entity to be countable in relevant methods. It helps in quantifying the substance or entity like one, two, three, etc.

संख्य स्याद्गणितं । (C.S.Su.26/36)

गणितमिहैकद्वित्रीत्यादि । (Commentary of Chakrapani on C.S.Su.26/36)

Clinical Application – Numbers have a greater role to play in every part of our life. With respect to treatment it defines the dose of the medicament, number of frequency, etc so as to attain the fine accuracy required in treatment modalities. Moreover, the numbers are also important to differentiate the disease conditions and give accuracy to the diagnosis along with treatment too.

Samyoga (Integration/Combination)

Samyoga is a condition where two or more substances combine to form a combination. This is the basis of various formulations or processes or Yoga. With respect to the context, it is the quality of the substance that needs to be taken into consideration which allows the substance to combine with others in a way where its original identity is not lost or can be retrieved. Thus it is a temporary combination and can be separated at any point of time if necessary. The combination can be in any form like physical, chemical or even both. But when the combination is right from the point of origin of the substance, then such a combination is considered as Nitya or permanent. While the combination is done later for a purpose, then such a combination can be separated which is considered as Anitya or temporary.

संयोगः पुनर्द्वयोर्बहूनां वा द्रव्याणां संहतीभावः । (C.S.Vi.1/22)

योगः सः संयोग उच्यते । (C.S.Su.26/32)

Based on the nature or cause (Karana) of combination, it is of 3 types which are temporary in nature namely –

1. Dvandvakarmaja
2. Sarvakarmaja
3. Ekakarmaja

द्रव्याणं द्वन्द्वसर्वैककर्मजोऽनित्य एव च । (C.S.Su.26/32)

द्वन्द्वस्य द्वयोः, सर्वेषां बहूनाम् एकस्य च कर्मणः जायते तेन त्रिविधः । (Yogendranath Commentary on C.S.Su.26/30)

The combination of two substances with the active involvement of both in making the combination happen is known as Dvandvakarmaja. For example, the combination of tulasiswarasa with Marichachurna or the dosha with the Dhatu or dushya in a pathogenesis of a disease.

The combination of more than two substances where all the ingredients take an active role in making the combination happen is known as Sarvakarmaja. For example, the combination of many ingredients in Talisadichurna or the activity of all the 3 dosha and some related dhatu in causing the disease during pathogenesis.

The combination of two or more substances where only one among the lot is actively involved in resulting a combination, then such a combination is known as Ekakarmaja. For example, a dosha that goes to a region, combine with the local dhatu and cause a disease as in case of Sandhivata.

The vaisheshikadarshana has mentioned three types of Samyoga namely Anyatarakarmaja, Ubhayakarmaja and Samyogaja. Among these the first two are as explained in case of Dvandvakarmaja and Ekakarmaja while the last one namely Samyogaja which explains the combination of body parts that can be separated with an example of a finger attaching to the hand that can be separated and is not life threatening normally is different from those mentioned by Charaka. This is mentioned in place of Sarvakarmaja.

Clinical Application– The property is useful in the purpose of treatment to have a suitable combination of medication, assessment of the body components that are involved in the diseases and different ways to counter them so as to cure the diseases.

Vibhaga (Disintegration/Separation)

The property that leads to disintegration of the substance or separation of a combination is known as Vibhaga.

संयोग नाशको गुणो वभिागः । (Tarka Sangraha)

Even this is a temporary property which is classified to be of 3 types namely –

1. Dvandvakarmaja
2. Sarvakarmaja
3. Ekakarmaja

The explanation of the three is as it is told in Samyoga but the difference here is the process and the property being the ability to get separated. The Vaisheshika

Darshana also has mentioned the same way of explanation and classification as Samyoga for Vibhaga also. Here also the third type is Vibhagaja which is based on the separation of the body component or part of the body like finger being amputed from the body or hand.

The vibhaga is also explained to be of 3 varieties based on the process namely: Vibhakti – separation by cutting into pieces, Viyoga – separation of the materials like heterogenous mixture and Bhagashograha – possession of a part of the substance or group or a mixture.

विभागस्तु विभक्तिः स्याद्वियोगो भागशो ग्रहः । (C.S.Su.26/33)

Clinical Application– The property is used for the dosing of the medicine in a proper way to have the optimum therapeutic effect. The use of the guna also be useful in the preparation of different formulations like cutting of raw materials, preparing the powders or churna, separating the different constituents or parts, etc.

The two properties namely Samyoga and Vibhaga are the aspect that happens simultaneously to bring about a change. The properties Samyoga and Vibhaga is the ability to be combined and disintegrated and it is this property that brings about action or Karma. The effect of karma is the one that is seen as a change either within the substance or the body wherever the karma has taken place. For example the part of the medicinal formulation is given internally in a particular dose which again interacts within the body with the components so as to reverse the change that had lead to the disease.

Prithaktwa (Differentiated)

The property Prithaktwa is the one that defines or differentiates a substance from the other. The ability of the substance to maintain its identity even when being in combination of other substances is known as Prithaktwa.

पृथग् व्यवहारासाधारणं कारणं पृथक्त्वम् । (Tarka Sangraha)

इदं द्रव्यं पट लक्षणं घटात् पृथकित्यादिका वुद्धिर्यतो भवति तत् पृथक्त्वम् । **(Chakrapani Commentary on C.S.Su.26/36)**

पृथक्त्वं स्यादसंयोगो वैलक्षण्यमनेकता । (C.S.Su.26/33)

This is of three types namely Asamyoga, Vailakshanya and Anekata. The ability of the substance to be in a position that makes it to be away from the other constituent of combination is known as Asamyoga. For example the combining of fruits trees from the forests of south and that of the north.

The distance between the two becomes the hindrance for the combination to occur. The ability of the substance to maintain its identity even when it is in a combination giving heterogenocity to the combination is Vailakshanya. The components of the combination are distinct and can be easily distinguished. For example the peculiarity of size and property that are present in various strains of components of dashamula. The last type of Prithaktwa is Anekata which stands for that type of property which makes the substance different within the same group. For example the colour and size of rice grains within the bag stands to this type of Prithaktwa.

Clinical Application– The property is used in ascertaining the quality of the material that is being used for preparing medicinal formulations. The different feature of Haritaki obtained from the trees of Himalayas from that of the western ghats gives an idea of the quality that it may possess and relatively in the formulations that has been prepared from it. This inturn will be leading to understand the formulation's interaction with the body.

Parimana (Weights & Measurements)

The ability of the substance to get measured in a certain way is known as Parimana. It consists of the different measurement scales like volumetric, area and weight like Prastha, adhaka, etc.

परिमाणं पुनर्मानं । (C.S.Su.26/36)

मानं प्रस्थाढकादि तुलादिमेयम् । (Chakrapani Commentary on C.S.Su.26/36)

परिमितिव्यवहारकारणं परिमाणं मानं प्रस्थाढकादि । (Yogendranath)

परिमाणं भवेन्मानव्यवहारस्य कारणम् । (Karikavali)

Based on the material and the way that the measurement is done, it is of 2 types basically. They are Dairghyamana and Gurutwamana. The Dairghyamana represents the measurement of substances with respect to its dimensions while the Gurutwamana represents the measurement of substances with respect to its weight.

Depending on the substance measured, Dairghyamanais of two types namely Nitya and anitya. The nitya is with regards to the paramanu while anitya is with respect to all other substances or materials. This is also classified into 3 types namely Sankhyajanya, Parimanajanya and Prachyajanya. The sankhyajanya consists of numbers that are used in counting or area measurements like 1,2,3, etc metres, centimeter,etc., the Parimanajanya is the volumetric measurements

like litres, milliliters, etc., and Prachyajanya is the measurement of mass or space like bales, cubic feet, etc.

Gurutwamana also are of two types depending on the substance measured namely Nitya in case of Paramanu only and anitya in case of all other materials or substances. The variety of measurement is with respect to the weight of the object that is being measured like grams, kilograms, etc.

Based on the different morphological characters, Karikavali has mentioned it to be of 4 types namely Anu (Micro), Deergha (Macro), Mahat (Large) and Hrisva (Small).

अणु दीर्घ महद् ह्स्वमिति तद्भेद ईरितः । (Karikavali)

Clinical Application - The use of the property clinically is with respect to the determination of different measurements to determine the dose, application time and thickness, ratio of ingredients in the formulations, etc such that a planning of treatment is possible.

Samskara (Processing)

The ability of the substance to undergo change in their physical and chemical properties due to the processing techniques is known as Samskara. Thus, new properties are obtained in the substance making it more suitable for the purpose chosen. The processes may be involve boiling, heating, washing, etc. that initiate the change in the substance.

संस्कारः करणं मतम् । (C.S.Su.26/36)

करणं गुणान्तराधायकत्वं संस्करणमित्यर्थः । (Chakrapani Commentary on C.S.Su.26/36)

करणं पुनः स्वाभाविकानां द्रव्याणामभिसंस्कारः । संसकारो हि गुणान्तराधानमुच्यते ।
ते गुणास्तोयाग्निसन्निकर्षशौचमन्थनदेशकालवशेन भावनादिभिः कालप्रकर्ष भाजनादिभिश्चश्चाधीयन्ते ।। (C.s.vi.1/22)

This property is of 3 types namely Vega, Sthitisthapakatva and Bhavana. When the processes initiate the movement of the substance is known as Vega. When the processes initiate the movement or change in the substance and when the substance resists it resulting which it gets back to its original condition is known as Sthithisthapaka. Lastly, the substance has a permanent change like addition of the qualities to its original ones leading to the production of impressions in them are known as Bhavana

Clinical Application- The property of the substance to undergo a change and be suitable for use in different disease conditions is an important aspect

from clinical point of view. The processes not only makes the substance to be consumable but also at times durable too. For example by proper shodhana process, even the poisonous substance becomes suitable for consumption.

Abhyasa (Habituation)

The ability of attaining the property through continuous effort leading to habituation is known as Abhyasa. The property is also known by the name Sheelana and Satatakriya. The habituation is a method to create acceptability of the substance. Certain substance is need to be habituated so that maximum benefit is obtained. At times due to long and chronic use will lead to a cumulative effect on the body components.

भावाभ्यासनमभ्यासः शीलनं सततक्रिया । (C.S.Su. 26/34)

Clinical Application- This property is useful in understanding and habituating the wholesome diet, regimen, lifestyle in clinical practice. The procedure is mentioned in the text Astanga Sangraha as how to habituate and replace a wholesome diet or lifestyle instead of an unwholesome one.

पादांशेत त्यजेतदसात्म्यमहितं हितमाचरेत् । एकान्तरं ततश्चोद्र्ध्वं द्वयन्तरं त्र्यन्तरं तथा ।। (A.S.Su.9/34)

Research updates on Paradi Gunas

The properties Paradi guna, is said to be an important component for clinical practice was reviewed and published by Dr. Monalisa Hansdah et.al., (Hansdah M. et.al., 2022) which showed that the physician needs to be expertised in the set of properties so as to apply it for better and effective treatment.

3.4. GLOSSARY

To summarize the chapter here are the few important points -

- Guna is defined as a component that is present in the substance and is devoid of any property nor action of its own.
- Guna is basically classified into 3 types namely Samanya (30), Vishishta (5) and Adhyatma (6). The Samanya is again classified into Gurvadi (20) and Paradi (10).

Gurvadi Gunas at a glance

Guna	Mahabhuta	Action	Example
Guru	Prithvi, Jala	Brimhana, Chirapaki, Balya, Tarpana, Vatahara and Kaphakara.	Metals, Draksha

Laghu	Akasha, Vayu, Agni	Langhana, Shigrapaki, Chaitanya, Lekhana, balakshaya, Apatarpana, Ropana, Kaphahara and Vatakara.	Laja, Mudga, Maricha
Manda	Pritvi, Jala	Shamana, Shithila, Vatahara and Kaphakara.	Kutaja, Guduchi, Shali
Teekshna	Agni	Shodhana, Pakakara, Dahakara, Sravana, Pittakara, Kaphahara and Vatahara.	Bhallataka, Lanka, Maricha, Chitraka,
Sheeta	Jala, Prithvi, Vayu	Stambhana, Dahanashaka, Hladana, Tritnasha, Murchahara, Vatakara, Kaphakara and Pittahara.	Draksha, Nimba, Kutaja
Ushna	Agni	Swedya, Dahakara, Trishnakara, Sanjnyanasha, Pachana, Pittakara and Vata-kaphahara.	Bhallataka, Lanka, Maricha, Chitraka,
Snigdha	Jala	Kledana, Mardavakrit, Varnya, Balya, Vatahara and Kaphakara	Taila, Ghrita
Ruksha	Agni, Vayu, Prithvi	Shoshana, Balanasha, Kharakara, Stambhana, Vatakara and Kaphahara.	Yava, Maricha, Shunti, Jambu
Shlakshna	Akasha/Agni	Ropana, Dhatu vardhaka, Vatahara, Pittavardhaka and Kaphavardhaka.	Asana, Shaka, Vajra
Khara	Vayu, Agni, Prithvi	Lekhana, Kleda achushana, Ropana and Vatakara.	Parijata, Maricha, Godhuma, Kulatha
Sandra	Prithvi, Vayu, Agni	Prasadana, Sthulakara, Bandhaka, Kaphakara and Vatahara.	Madhu, Ghrita, Masha
Drava	Jala, Agni, Prithvi	Vilodana, Kaphakara and Pittavardhaka.	

	Jala, Ksheera, Taila, Bhallatakataila, Sugar syrup		
Mridu	Akasha, Jala	Shlathana Mardavakara, Kaphakara, Vata and Pittahara.	Charcoal, Ghrita, Navaneeta
Kathina	Prithvi	Dridikarana and Vatakara.	Pravala, Heeraka
Sthira	Prithvi	Dharana, Sthiratva, Balya,-Vatahara and Kaphakara.	Shankha, Bala
Chala	Jala	Anulomana and Vatakara.	Draksha, Trivrit
Sukshma	Agni, Vayu, Akasha	Vivarana, Vatakara and-Kaphahara.	Sura, Bhallataka, Madhya, Kupeelu, Visha, Karaveera,
Sthula	Prithvi	Samvarana, Sthaulyakara, Srotorodha, Kaphakara, Vata and Pittahara.	Pravala, Kumari
Vishadha	Prithvi, Vayu, Agni, Akasha	Kshalana, Ropana, Vatakara and Kaphahara.	Kutaja, Asana, Snuhi, Mudga, Nimba, Apamarga, Laja,
Picchila	Jala	Lepana, Jeevana, Balya, Bandha, Vatahara and Kaphakara.	Asthishrinkala, Sugar, Shleshmataka

- The 10 Paradi Gunas are
  - Paratwa – Superior/Favourable
  - Aparatwa – Inferior/Unfavourable
  - Yukti – Logical planning
  - Sankhya – Numbers
  - Samyoga – Combination
  - Vibhaga – Disintegration/ Separation
  - Prithaktwa – Distinction
  - Parimana – Measurements
  - Samskara – Processing
  - Abhyasa – Habituation

- The Vishishtaguna are the properties that are related to the Mahabhuta in their purest (Tanmatra) form and are found in our sense organs. They are Shabda, Sparsha, Rupa, Rasa and Gandha
- The three groups namely Vishishta, Paradi and Gurvadigunas totally form the Adibhautikaguna.
- The Adhyatmikaguna is also known as Atmaguna which is 6 in number namely Sukha, Dukha, Iccha, Dwesha, Buddhi and Prayatna.

3.5. Exercise

Long Answers

1. Define Guna. Explain its classification and describe Paradi Guna in detail
2. Define Guna, classify them and explain Gurvadi Guna in detail.
3. What are Samanyagunas and explain the Paradiguna in detail with suitable examples
4. Explain Gurvadiguna in detail with suitable examples along with their clinical use.
5. Explain briefly the concept of Guna.

Short Answers

1. Explain the Guru-Laghuguna in detail
2. Explain Samyoga and Vibhagaguna in detail
3. Explain briefly the clinical application of Gurvadigunas.
4. Explain briefly the clinical application of Paradigunas
5. What are contribution of different researchers towards the concept of Guna.

Multiple Choice Questions

1. Which property that is associated with the action of Prerana?
   a. Guru b. Sukshma c. Samyoga d. Chala
2. What is the action attributed to Sukshma Guna by Hemadri?
   a. Vivarana b. Swedana c. Shodhana d. Lekhana
3. Which property is mentioned by Sushruta under Gurvadi Guna as an opposite to Mriduguna?
   a. Kathina b. Sukshma c. Teekshna d. Sthula
4. How many gunas are there for Atma as per Charaka Samhita?
   a. 6 b. 10 c. 8 d. 5

5. How is the association of Guna with Dravya?
   a. Samanya b. Samavaya c. Vishishta d. No association
6. Which is the type of Mana in the list below?
   a. Ganita b. Guru c. Samyoga d. Sankhyajanya
7. What is the main utility of Guru guna?
   a. Brimhana b. Vivarana c. Kaphahara d. Vatakara
8. Which guna has the synonym as Sheelana?
   a. Samskara b. Sankhya c. Abhyasa d. Vishesha
9. Which guna has a variety named as sthithistapakatva?
   a. Samskara b. Sthula c. Samyoga d. Samyoga
10. What are the types of Samyoga?
    a. Ekakarmaja b. Dvandvakarmaja
    c. Sarvakarmaja d. All the above

Answer Key									
1 d	2 a	3 c	4 b	5 b	6 d	7 a	8 c	9 a	10 d

Bibliography

1. Sharma P. V. (1984). Dravyaguna Vignyana. Varanasi. Chaukhambha Bharati Academy.
2. Agnivesha (1998). Charaka Samhita (Vol 1-2). Redacted by Charaka: Hindi commentary by Kashinatha Shastri, Gorakhanatha Chaturvedi: Rajeshwaradatta Shastri, YadunandanaUpadhaya, Ganga SahayaPandeya, Banarasidasa Gupta (eds), Varanasi. Chaukhambha Bharati Academy.
3. Mishra Y.C. (2004). Padartha Vijnana. Acharya Jyotirmitra (ed), Varanasi. Chaukhambha Sanskrit Bhavan.
4. Agnivesha (2002). Charaka Samhita (2nd ed., Vol 1-5). Redacted by Charaka: Sanskrit commentary Ayurvedadipika by Chakrapani, Jalpakalpataru by Gangadhar: Sengupta Narendranath, Sengupta Balaichandra (eds), Varanasi. ChaukhambhaOrientalia.
5. Vagbhata (1997). Astanga Sangraha (12th ed.). Hindi commentary Vidyotini by Atrideva Gupta: Yadunandana Upadhyaya (ed.), Varanasi. Chaukhambha Sanskrit Sansthan.
6. Kallianpur Supriya, Gokarn Rohit (2019). A text book of Dravyaguna Vijnana (1st ed., Vol 1-2). Varanasi. Chaukhambha Orientalia.
7. Shastry J.L.N., Nesari M. Tanuja. (2019). A text book of DravyagunaVijnana (Reprint., Vol 1-2). Varanasi. Chaukhambha Orientalia.
8. Sushruta (1997). Sushruta Samhita (11th ed., Vol 1-2). Hindi commentary Ayurveda tattva sandipika by Ambikadutta Shastri, Varanasi. Chaukhambha Sanskrit Sansthan.

19 JA-473-I

9. Sharma, N., Yadav, C. R., & Meena, M. S. (2015). Assessment of guru guna of kapha dosha wsr to efficacy of tryushanaadilauha in sthaulya. International Ayurvedic Medical Journal. 3, 8, 2429-440.

10. Akre, M., Kharat, R(2019). Physicochemical and phytochemical analysis of guru and laghu-gunadravyawsr to aushadhiyadravya. World Journal of Pharmaceutical Research. 8, 3, 773-782

11. Acharya, Y.T. (1997). Dravyaguna Vijnanam (7th ed., Vol 1-2). Nagpur. Shree Baidyanath Ayurved Bhavan Limited.

12. Vikas, B., Sharma, P., Sahana, C. (2016). Manda and Teekshna Guna – A critical appraisal. European Journal of Biomedical and Pharmaceutical Sciences. 3, 10, 140-144.

13. Mane, S., Vyas, M., Ravishankar, B., & Dwivedi, R. R. (2010). Evaluation of some objective parameters for Ushna and SheetaGunas based on pharmacological study. Ayu, 31(2), 147-152.

14. Mishra, S., Dwivedi, R. R., & Ravishankar, B. (2011). Conceptual and applied study of Snigdha and Ruksa Guna with special reference to Rasa-raktagata Sneha (hyperlipidemia). Ayu, 32(2), 200–206.

15. Khandale N. S. (2019). Development Of Assessment Criteria ForShlakshna Guna Of Kapha Dosha: A Possible Model. International Ayurvedic Medical Journal.8,1, 2653-2658.

16. Gangwar A, Yadav S.S (2023). Critical Analysis of Gurvadi Guna According to Hemadri- A Review Article. International Research Journal of Ayurveda and Yoga. 6, 7, 104-110

17. Jyoti Devangamath, Sapna Narasanagi, JayashreeKS, ShreevathsaS.(2021). Insight Of Sandra and Drava Guna. Journal of Ayurveda and Holistic Medicine (JAHM). 4, 4, 47-53.

18. Milkhe, V. P. P., Shende, V. M., Kharat, V. R., & Shekokar, V. S. (2019). Concept of Gurvadi Guna & Application of Tikshna, Sthira, Sara, Mrudu, Kathina, Vishada, PicchilGunasIn Ayurveda.World Journal of Pharmaceutical Research. 8, 10, 422-434.

19. Ingle Pradeep Atmaram, Bal Ajayraj (2022). Applied aspect of GurvadiGunas: An Ayurvedic Review. World Journal of Pharmaceutical and Medical Research. 8, 1, 146-149.

20. Mishra Yogesh Chandra (2004). Padartha Vignana: Basic principles of Ayurveda (1st ed.). Acharya Jyotirmitra (ed.), Varanasi. Chaukhambha Sanskrit Sansthan.

21. Hansdah M, Das A.K, Sahoo M.K, Dash B.R. (2022). A Concept Of Paradi Guna (Samyoga) And Its Clinical Utility. International Research Journal on Ayurveda and Yoga (IRJAY).5, 6, 145-149.

CHAPTER NO.: 4

CONCEPT OF RASA

Dr. Anjali Kumari M. U.

Objectives of the Chapter

1. Define Rasa and interpret Meaning of "Rasa" in various contexts
2. Classify and compare shadrasa in relative correlation with taste of chemical constituents
3. State Rasa Utpatti and Panchabhoutika constitution of Shadrasa
4. Discuss Rasopalabdhi
5. Interpret pathway of taste perception & sites of taste receptors in the body
6. Describe Guna and Lakshana of each Rasa
7. Explain karma of each rasa on Dosha, Dhatu and Mala with examples
8. Discuss Atiyoga of each rasa
9. Interpret Clinical application of each rasa
10. Discuss research updates of Shadrasa
11. Define Anurasa
12. Interpret relevance of Anurasa in clinical practice
13. Describe with justification Rasa sevanakrama as Aushadha

Topics in the Chapter

4.1 Meaning of "Rasa" in various contexts

4.2 Shadrasa in relative correlation with taste of chemical constituents

4.3 Rasotpatti and Panchabhoutika constitution of Shadrasa

4.4 Rasopalabdhi and pathway of taste perception & sites of taste receptors in the body

4.5 Rasa -Lakshana, Guna & Karmas of each Rasa on Dosha, Dhatu and Mala

4.6 Atiyogalakshana

4.7 Clinical application of each Rasa and Research updates of Shadrasa

4.8 Anurasa

4.9 Rasa Sevanakrama of Aushadha

Introduction

Rasa is one among the Saptapadartha in Dravyaguna. It serves as the paramount and pivotal means for evaluating the Guna (properties) and Karma (action) of any substance. In many instances, the other attributes namely Guna, Vipaka and Virya, can be reliably anticipated based on the Rasa. Thus, ascertaining the Rasa stands as the utmost foundational step to determine the pharmacological behavior of any substance. Rasa also form the important factors for the management of vitiated Doshas.

Rasa Nirukti (Etymology of Rasa)

आस्वादे अ. चु. सक. सेत रसयति-तेअरसत्-त । पु. रस्यते इति रस अच्, रसधातु । अच् प्रत्यय । आस्वाद्ये । रसआस्वादने। (Vachaspati)

Rasa is an attribute of the drug which is experienced by an individual (on consumption) or by tasting it.

4.1. MEANING OF "RASA" IN VARIOUS CONTEXTS

Interpretation of "Rasa" and its meaning in various contexts:

The term 'Rasa' in Indian literature holds various interpretations depending on the specific context. In the book 'Shabdakosha' multiple meanings are attributed to the word 'Rasa'. In Ayurveda, 'Rasa' primarily finds its usage in four distinct contexts, each carrying its unique etymological significance, as follows:

1) Rasa - as Main Dhatu in the Shareera

तत्र 'रस' गतौधातुः, अहरहर्गच्छतीत्यतो रसः | (S.S.Su.14/13)

As per the domain Shareerashastra, Rasa is one among the Saptadhatu which is the first Dhatu that circulates and provides nutrition all over the body.

2) Rasa - as Parada (Mercury)

रसनात् सर्वधातूनां रस इत्यभिधीयते| (R.R.S.1/77)

As per the text Dravyaguna Vijnyana by P V Sharma, the word meaning of rasa as follows

रसति भक्षयति सर्वान् लोहान् इति रसः। (D.gv.vol 1. pg190.)

In Rasashastra, Parada or Mercury is considered as rasa due to its characteristic feature of assimilating all the metals like Swarna, Rajata etc. within itself.

3) Rasa - as Kalpana (Preparation)

आहतात्तक्षणाकृष्टाद् द्रव्यात्क्षुण्णात्समुद्धरेत् । वस्त्रनिष्पीडितोयः स रसः स्वरस उच्यते॥ (S.S.Ma.1/2)

As per the text Dravyaguna Vijnyana by P V Sharma, the word meaning of rasa as follows

रसति शरीरे आशु प्रसरति इति रसः। (D.Gv.Vol 1. pg190)

In the context of Bhaishajya Kalpana, the word Rasa denotes the liquid or juice that is extracted through the process of grinding and squeezing the medicinal herbs. This preparation is also termed Swarasa, that is said to be exhibiting a quicker action than others.

4) Rasa - as Guna-Vishesha (Indriyaartha)

रस्यत आस्वाद्यत इति रसः| (Chakrapani Commentary on C.S.Su.1/64)

रस्यते आस्वाद्यते रसनेन इतिरसः | (D.Gv.Vol 1. pg190)

In the domain of Dravyaguna, the term 'Rasa' is a special entity, which is perceived by Rasanendriya (tongue). The Rasa like Madhura, Amla, Lavana etc are perceived through the tongue. The same is also considered in the Shareera also but the approach in the Shareera context is the organ of perception but in the present context it is the property of the substance that is being perceived by the organ.

Definition of Rasa

रसनार्थो रसः| (C.S.Su.1/64)

The sense obtained through Rasanendriya (taste buds) present in the tongue (Jihwa) is known as Rasa.

रस्यत आस्वाद्यत इति रसः| रसनार्थ इति जिह्वाग्राह्यः| (Chakrapani Commentary Cha.Su.1/64)

Whatever is being tasted or enjoyed by the tongue is known as Rasa. Rasanartha means the object that is perceived by the tongue.

रसलक्षणमास्वादः | (Rasavaisheshika. 1/167)

That which can be ascertained by the taste is rasa. Thus, the characteristic of rasa is taste.

रसनेन्द्रियग्राह्यो योऽर्थः स रसः। (D.G.Sa. 1/1-Shi)

An attribute of the drug which is perceived by Rasanendriya is rasa

रसस्तु रसनग्राह्यो मधुरादिरनेकधा। (Kaarikavali.101)

Rasa is an attribute of the substance which is recognised by the Rasanendriya like Madhura, Amla, Lavana etc.

तत्र व्यक्तो रसः स्मृतः|| (A.H.Su.9/3)

तत्र-तस्मिन् द्रव्ये, यो व्यक्तः-स्फुट उपलभ्यते, स रसः स्मृतस्तन्त्रकृद्भिः| (Arundatta Commentary -A.H.Su.9/3)

Rasa (chief / primary taste) is defined as the distinct taste perceived from the substance.

Here the term vyakta refers to sphuta which means 'Clearly perceived' or 'distinct'.

तत्र व्यक्तो रसः| (A.Sa.Su.17/3)

तत्र च द्रव्य रसनेन्द्रियग्राह्यो व्यक्तः स्फुटो रसशब्देनोक्तः| (Indu Commentary on A.Sa.Su.17/3)

Rasa is the taste in a substance that is distinctly perceptible through the rasanendriya.

व्यक्तः शुष्कस्य चादौ च रसो द्रव्यस्य लक्ष्यते| (C.S.Su.26/ 28)

व्यक्त इत्यादि| शुष्कस्य चेति चकारादार्द्रस्य च, आदौ चेति चकारादन्ते च; तेन शुष्कस्य वाऽऽर्द्रस्य वा प्रथमजिह्वासम्बन्धे वाऽऽस्वादान्ते वा योव्यक्तत्वेन मधुरोऽयमम्लोऽयमित्यादिना विकल्पेन गृह्यते, स व्यक्तः; (Chakrapani Commentary on C.S.Su.26/ 28)

Here in the word 'Suskasya cha' the term 'cha' represents the dry substances as well as wet substances also. 'Aadau cha' - the cha kaara in this term should be taken as at the beginning and in the end.

The taste which can be clearly perceived in the beginning or at the end by the tongue through contact of a dry or wet substance is known as rasa.

Definition of taste :

Taste is the perception that gets stimulated when the substance in the mouth reacts chemically with taste receptors located on taste buds present in the tongue. Taste is mainly a function of the taste buds located in the mouth. Taste is closely interlinked with smell, as it is common experience that one's sense of smell also significantly influences taste perception.

4.2. Shadrasa in Relative Correlation with Taste of Chemical Constituents

The number of Rasa (Taste) in Ayurveda is universally recognized as six, although various Acharyas may differ in the order in which they mention these Rasas. The names of the Rasas as mentioned by different Acharyas are as follows:

स्वादुरम्लोऽथ लवणः कटुकस्तिक्त एव च | कषायश्चेति षट्कोऽयं रसानां सङ्ग्रहः स्मृतः|| (C.S.Su.1/65)

षडेव रस इत्युवाच भगवानात्रेयः पुनर्वसुः, मधुराम्ललवणकटुतिक्तकषायाः| (C.S.Su.26/9)

In the Charaka Samhita, the names of the Shadrasa are referenced in two distinct contexts of sutrasthana i.e., Dhirghanjeevitiyaadhyaya and Aatreya Bhadrakaapiyaadhyaya. Swadhu (Madhura), Amla, Lavana, Katu, Tikta, Kashaya are considered as six rasas (Rasa sangraha).

स खल्वाप्यो रसःशेषभूतसंसर्गाद्विदग्धः षोढा विभज्यते; तद्यथा- मधुरोऽम्लोलवणःकटुकस्तिक्तःकषायइति| (S.S.Su. 42/ 3)

In Susrutha Samhitha, it is mentioned that Rasa, though originally Aapya, undergoes division into six kinds after combining with the remaining bhutas and undergoing ripening. These six kinds are Madhura, Amla, Lavana, Katu, Tikta and Kashaya.

रसाः स्वाद्वम्ललवणतिक्तोषणकषायकाः | षड् द्रव्यमाश्रितास्ते च यथापूर्वं बलावहाः|| (A.S.Su. 1/23)

रसाःस्वाद्वम्ललवणतिक्तोषणकषायकाः || षड् द्रव्यमाश्रितास्ते च यथापूर्वंबलावहाः|| (A.H.Su.1/14-15)

Astanga Sangraha and Astanga Hridaya, both mention that substances contain six rasas : Swadhu (Madhura), Amla, Lavana, Tikta, Ushana (Katu) and Kashaya. The preceding rasas are noted for providing greater strength to the body compared to the subsequent rasas.

Classification of Shadrasa

I) Saumya and Agneya Rasa

This reference of classification of Shadrasa are available in Sushrutha Samhita. They are as follows:

केचिदाहुः- अग्नीषोमीयत्वाज्जगतो रसा द्विविधाः- सौम्या आग्नेयाश्च |

मधुरतिक्तकषायाः सौम्याः; कट्वम्ललवणा आग्नेयाः | .... सौम्याः शीताः, आग्नेया उष्णाः || (S.S.Su. 42/7)

The rasas can be categorized into two types: Saumya (watery / cool) and Agneya (fire / hot), reflecting the predominant qualities of fire and water (Agnisomeeyaat) in the universe.

Madhura, Tikta and Kashaya fall under the Saumya Rasa category, while Katu, Amla and Lavana are classified as Agneya Rasa.

Saumya rasas exhibit a Sheeta (cool) nature, while Agneya Rasas are characterized by Ushna nature.

केचिदित्यादि| अग्नीषोमीयत्वादिति अग्निश्च सोमश्च योनिर्जगत इत्यर्थः| (Dalhana Commentary on S.S. Su.42 /7)

'Agnisomeeyatvaat' signifies the origin (yoni) of the universe consists of Agni (fire) and Soma (water).

कट्वम्ललवणा वैद्यैर्विदाहिन इति स्मृताः । स्वादुतिक्तकषायाःस्युर्विदाहरहिता स्मृताः॥

विदाहिनो रसा मूर्छा जनयन्तीति निश्चिताः । अविदाहिनस्त्वच्छमनाः कीर्तिता भिषगुत्तमैः॥ (Rasavaisheshika Sutra3/14-15 - Bhasya)

Agneya Rasa is known as Vidahi Rasa because it can induce Vidaha (burning sensation) and Murcha (Unconsciousness). In contrast, Saumya Rasa is referred to as Avidahi Rasa because it tends to pacify these Vidaha and Murcha.

Significance : In the treatment of conditions caused by Ama like Agnimandhya, Ajeerna, Agneya Rasa can be a suitable choice. However, in diseases dominated by Pitta such as Raktapitta and Kamala, Saumya Rasa is often a preferred selection.

II) Snigdha and Ruksha Rasa

मधुरोलवणाम्लौ च स्निग्धभावात्त्रयो रसाः | वातमूत्रपुरीषाणां प्रायो मोक्षे सुखा मताः||

कटुतिक्तकषायास्तु रूक्षभावात्त्रयोरसाः | दुःखाय मोक्षे दृश्यन्ते वातविण्मूत्ररेतसाम्|| (C.S.Su.26/59-60)

Madhura, Lavana and Amla Rasa are considered as Snigdha Rasa and they helps in easy elimination of Vata, Mutra and Purisha.

Katu, Tikta and Kashaya Rasa are considered as Ruksha Rasa and they makes difficulty in elimination of Vata, Mutra and Purisha.

III) Guru and Laghu Rasa

सौम्याश्चाग्नेयाश्चेति चकारद्वयात् स्नेहरूक्षगुरुत्वलघुत्वैरपि द्वैविध्यं सूचयति|| (Dalhanacommentary on S.S.Su.42/7)

The term 'Cha' in 'Shaumyaaschaagneyaaschethi' implies that in addition to Saumya and Agneya Rasas, there are two other categories of rasas, namely Sneha and Ruksha Rasas as well as Guru and Laghu Rasas.

तत्र मधुराम्ललवणाः स्निग्धागुरवश्च, कटुतिक्तकषाया रूक्षा लघवश्च; | (S.S.Su.42 /7)

Additionally, Madhura, Amla and Lavana are characterized as Snigdha and Guru Rasa whereas Katu, Tikta, Kashaya fall into the Ruksha and Laghu Rasa category.

IV) Doshashamaka Rasa and Doshavardhaka Rasa

स्वाद्वम्ललवणा वायुं, कषायस्वादुतिक्तकाः | जयन्ति पित्तं, श्लेष्माणं कषायकटुतिक्तकाः||

कट्वम्ललवणाः पित्तं, स्वाद्वम्ललवणाः कफम् | कटुतिक्तकषायाश्च कोपयन्ति समीरणम् || (C.S.Su.1/66)

तत्र, मधुराम्ललवणा वातघ्नाः, मधुरतिक्तकषायाः पित्तघ्नाः, कटुतिक्तकषायाः श्लेष्मघ्नाः || (S.S.Su.42/4)

तत्राद्या मारुतं घ्नन्ति त्रयस्तिक्तादयः कफम् || कषायतिक्तमधुराः पित्तमन्ये तु कुर्वते|

(A.S.Su.1/24 & A.H.Su.1/15)

Rasas are categorized into two groups based on their properties of either pacifying or aggravating the Doshas. These categories are as follows:

Classification	Dosha	Rasa
Dosha shamaka rasa	Vata	Madhura, Amla, Lavana
	Pitta	Madhura, Tikta, Kashaya
	Kapha	Katu, Tikta, Kashaya
Dosha vardhaka rasa	Vata	Katu, Tikta, Kashaya
	Pitta	Katu, Amla, Lavana
	Kapha	Madhura, Amla, Lavana

Classification of Taste in Contemporary Science

In contemporary physiology, there are five primary tastes are described, which include:

1) Sweet
2) Sour
3) Salt
4) Bitter
5) Umami

Note: Recently, Ammonium chloride is added as the sixth basic taste

Chemical Constitution Related to Taste:

The substances responsible for sour or salty tastes are primarily electrolytes, while bitter and sweet tastes are attributed to compounds that can be either electrolytes or non-electrolytes.

1) Sweet taste– is elicited by various organic compounds, including sugars, monosaccharides, specific polysaccharides, glycerol, alcohol, aldehydes, ketones, saccharine, chloroform etc. Interestingly, some inorganic substances can also evoke a sweet sensation, such as lead acetate and highly diluted alkalis. It is theorized, based on the work of Oertly and Myers, that every sweet substance consists of two components: the glucophore and auxoglue. Any substance containing both of these components will taste sweet.

2) Salty taste- primarily arises from inorganic compounds like chlorides, sulfates, bromides, iodides, and is attributed to the anions within these compounds. Some organic compounds can also impart a salty taste, such as the hydrochlorides of monomethyl and dimethyl amine.

3) Sour taste- results from acids or acid salts and is associated with the concentration of hydrogen ions, which determines acidity. Interestingly, certain organic acids like acetic acids, despite having limited ionization, can have a more pronounced acidic taste than mineral acids like HCL due to their greater ability to penetrate.

4) Bitter taste- is triggered by various organic compounds, including alkaloids like strychnine and quinine, specific glucosides and bile salts. Additionally, certain inorganic substances, such as magnesium, ammonium and calcium salts can produce a bitter taste. In the case of inorganic compounds, bitterness is associated with cations, while in organic compounds, it is somewhat related to the presence of No_2 group.

5) Umami- is a taste sensation that was recently recognized. The word 'Umami' originates from Japanese and translates to 'delicious'. Receptors for this taste respond notably to glutamate, particularly monosodium glutamate (MSG), which is a common ingredient in Asian cuisine. However, excessive consumption of MSG has been linked to the development of symptoms known as 'Chinese restaurant syndrome' in some individuals who regularly consume Chinese food.

Modern Equivalent of Shadrasa

Six rasas can be correlated to modern terminology as follows:

Sadrasa	Modern Equivalent to Rasa	Sadrasa	Modern Equivalent to Rasa
Madhura	Sweet	Katu	Pungent
Amla	Sour	Tikta	Bitter
Lavana	Salt	Kashaya	Astringent

Comparison of Shadarasa in relative correlation with taste of chemical constituents:

Acharya Priya Vrat Sharma has explored the concept of Rasa by considering the physico-chemical constitution of substances, presenting as follows:

Rasa	Physico-chemical Constitution of Substance
Madhura	Sugar, Fat and Aminoacids
Amla	Acids
Lavana	Salts
Katu	Essential oils, Phenols etc
Tikta	Certain Alkaloids and Glycosides
Kashaya	Tannins

As per his hypothesis, Madhura Rasa Dravyas contain both carbohydrates and proteins. Amla rasa Dravyas consistently exhibit an acidic reaction and all substances with Lavana rasa include Sodium Chloride. All the Katu rasa Dravya contain essential oils and approximately 50% of Katu rasa Dravya also contain alkaloids, glycosides or phenols. Alkaloids are present in all TiktarasaDravyas, while Glycosides are found in only 10% of Dravyas belonging to this category. Moreover, many Kashaya rasa Dravyas are characterized by the presence of tannin.

Acharya Priya Vrat Sharma initially proposed that the taste of a substance should be determined based on the presence of carbohydrates, acids, salts and tannins in the substance. However, subsequent studies indicated that his idea might serve as an additional parameter rather than being the exclusive criterion.

4.3. RASOTPATTI AND PANCHABHOUTIKA CONSTITUTION OF SHADRASA

Rasa Utpatti

रसनार्थो रसस्तस्य द्रव्यमापः क्षितिस्तथा | निर्वृत्तौ च विशेषे च प्रत्ययाः खादयस्त्रयः|| (C.S.Su. 1/64)

One which is being perceived by the Rasanendriya (gustatory organ) is Rasa. Ap and Prithvi Mahabhuta are responsible for the manifestation of rasa and the remaining bhutas such as Aakasha, Vayu and Agni are contributing to the distinction and cognition (distinctive perception) of Rasa.

रसनार्थइत्यादि|....तस्येति रसस्य| द्रव्यमिति आधारकारणम्| ...क्षितिस्तथेति यथा आप आधारकारणं तथा क्षितिरपि|....रसस्य किं व्यक्तावप्क्षिती कारणं किंवा विशेषे इत्याह- निर्वृत्तावित्यादि| निर्वृत्तौ चेति अभिव्यक्तौ| ...विशेषे च प्रत्ययाः खादय इति मधुरादिविशेषनिर्वृत्तौ निमित्तकारणं खवाय्वनलाः, नत्वाधारकारणभूताः| ....विशेषेचेति चकारादभिव्यक्तावप्याकाशादीनां निमित्तकारणत्वं दर्शयति|....अन्ये तु विशेषे चेति च कारं खादयश्चेत्यत्र योजयन्ति; तेनचकारात्कालोऽपिविशेषेऽभिव्यक्तौचकारणंलभ्यते| साक्षात्तुकालस्यावचनेन खादिभ्योऽप्यपकृष्टं कालस्य कारणत्वं दर्श्यते| किंवा रसस्यापो द्रव्यं क्षितिस्तथेति पूर्ववदेव; निर्वृत्तौ चेतिक्षितिरेवनिर्वृत्तावभिव्यक्तौप्रत्ययोनापः; यत आपो ह्यव्यक्तरसा एव, क्षितिसम्बन्धादेव च रसोऽभिव्यक्त उपलभ्यते| (Chakrapani Commentary on C.S.Su.1/64)

Dravya is the Aadhara Kaarana for the Rasa. Ap and Prithvi are Aadhara Kaarana (primary causative factors) for Rasanirvrutti. Visheshe cha pratyayaah-khadaya refers to Aakasha, Vaayu and Agni which are the nimittakaarana (secondary causative factors) for the distinction of the tastes. By 'cha kaara' it is inferred that kaala is also a factor responsible for the differentiation of tastes. However direct reference of kaala is not available and thus Aakasha and other bhutas are considered as nimittakaarana. Though ap is the aadharanakaarana of taste, is possessing avyakta rasa and the taste of it exhibits only when it is associated with Prithvi.

सौम्याः खल्वापोऽन्तरिक्षप्रभवाः प्रकृतिशीतालघ्व्यश्चाव्यक्तरसाश्च, तास्त्वन्तरिक्षाद् भ्रश्यमाना भ्रष्टाश्च पञ्चमहाभूतगुणसमन्विता जङ्गमस्थावराणांभूतानां मूर्तीरभिप्रीणयन्ति, तासु मूर्तिषु षडभिमूर्च्छन्ति रसाः|| (C.S. Su.26/39)

The moon (Saumyaah/deity of Soma) is considered as the governing deity of water. Antarikshajala, is cold by nature (Prakruthasheeta), light (Laghu) and possesses Avyakta rasa. However, when it begins to fall from the sky, it gets endowed with the properties of Panchamahabhuta. Upon reaching the ground, it nourishes both animal and plant kingdom. At this point, the six tastes emerge in these living beings.

आकाशपवनदहनतोयभूमिषु यथासङ्ख्यमेकोत्तरपरिवृद्धाः शब्दस्पर्शरूपरसगन्धाः, तस्मादाप्योरसः |

परस्परसंसर्गात् त्परस्परानुग्रहात् त्परस्परानुप्रवेशाच्च सर्वेषु सर्वेषां सान्निध्यमस्ति, उत्कर्षापकर्षात्तु ग्रहणम् | सखल्वाप्योरसःशेषभूतसंसर्गाद्विदग्धःषोढाविभज्यते; तद्यथा- मधुरोऽम्लोलवणःकटुकस्तिक्तःकषाय इति | तेचभूयःपरस्परसंसर्गात्त्रिषष्टिधाभिद्यन्ते | (S.S.Su.42/3)

Aakasha, Pavana (Vayu), Dahana (Agni), Toya (Jala / Ap) and Bhumi (Prithvi) Mahabhuta sequentially give rise to properties like sound (Shabda), touch (Sparsha), sight (Rupa), taste (Rasa) and smell (Gandha) respectively, with each succeeding element inheriting qualities from the preceding one. Therefore, taste is predominant in Ap Mahabhuta. Due to mutual combination (Parasparasamsargaat), mutual assistance (Parasparaanugrahat) and mutual blending (Parasparanupravesha) of the Bhutas, all substances contain the presence of every Bhuta. This can be deduced by the presence of either more or fewer qualities of the Bhutas. Despite being predominantly influenced by the Ap Bhuta, Rasa, when combined with the other Bhutas and subjected to ripening, differentiates into six types: Madhura, Amla, Lavana, Katu, Tikta and Kashaya. Furthermore, these six types further divided into sixty-three types by mutual combinations.

रसः खल्वाप्यः प्रागव्यक्तश्च| स षड्तुकत्वात् कालस्य महाभूतगुणैरूनातिरिक्तैः संसृष्टो विषमं विदग्धः षोढापृथग्विपरिणमते मधुरादिभेदेन|| (A.S.Su.18/2)

Rasa is derived from Ap Mahabhuta and is Avyakta in the beginning. Under the influence of the six Rutus, the Mahabhutas combine in diverse proportions within different substances. They then undergo further transformation, driven by the influence of Tejas, leading to the differentiation of rasa into six varieties, including sweet and so on.

कथं महाभूतानामूनाधिक्यमुच्यते| कालस्य संवत्सराख्यस्य षड्तुकत्वाद्रसस्यापि षड्भेदत्वं तथा च शिशिरे वाय्वाकाशयोराधिक्याद्रसस्य तिक्तता| वसन्ते वायुपृथिव्योः कषायता| ग्रीष्मेऽग्निवाय्वोः कटुकता| वर्षास्वग्निपृथिव्योरम्लता| शरद्यग्न्युदकयोर्लवणता| हेमन्ते पृथिव्युदकयोर्मधुरतेति| प्रधान्या द्व्यपदेशः तेनान्यर्तूद्भवानामपि रसानां यथोक्तमहाभूतद्वयाधिक्यमेव कारणं विज्ञेयम्|| (Indu Commentary on A.S. Su.18/2-3)

The year is divided into six Rutus, and in a similar fashion, the dominance of specific Mahabhutas leads to the formation of six distinct rasas. During the Shishira Rutu, the prevalence of Vayu and Aakasha Mahabhutas results in Tiktarasa. In the Vasanta Rutu, where Vayu and Prithvi Mahabhutas predominant, the Kashaya Rasa emerges. The Greeshma Rutu, characterized by the dominance of Agni and Vayu Mahabhuta, gives rise to the Katu Rasa. In the Varsha Rutu, the prevalence of Agni and Prithvi Mahabhuta Amla rasa develops. The Sharadrutu, marked by the predominance of Agni and Udaka (Jala) Mahabhuta leads to the formation of Lavana Rasa. During the Hemanta Rutu, where Prithvi and Udaka (Jala) Mahabhuta are predominant, the Madhurarasa is produced.

एवमेषां रसानां षट्त्वमुपपन्नं न्यूनातिरेकविशेषान्महाभूतानां भूतानामिव स्थावरजङ्गमानां नानावर्णाकृतिविशेषाः; षड्तुकत्वाच्च कालस्योपपन्नो महाभूतानां न्यूनातिरेकविशेषः|| (C.S.Su.26/40)

The manifestation of all six rasas occurs based on the predominance or scarcity of the Panchamahabhutas, similar to the formation of various shapes of plants and animals. This predominance or scarcity of Panchamahabhutas is influenced by the changing patterns of six seasons.

अयं च भूतानां सन्निवेशोऽदृष्टप्रभावकृत एव, स च सन्निवेशः कार्यदर्शनेनोन्नेयः| तेन यत्र कार्यं दृश्यते तत्र कल्प्यते यथा- लवणेउष्णत्वादग्निर्विष्यन्दित्वाच्चजलमनुमीयते|आगमवेदनीयश्चायमर्थो नात्रास्मद्विधानां कल्पनाः प्रसन्ति| एतेन यदुच्यते- तोयवत्पृथिव्यादयोऽपि किमिति पृथग्रसान्तरं न कुर्वन्ति, तथा तोयवातादिसंयोगादिभ्यः किमितिरसान्तराणिनोत्पद्यन्तइति, तदपिभूतस्वभावापर्यनुयोगादेवप्रत्युक्तम्| (Chakrapani Commentary on C.S.Su.26/40)

The combination of Mahabhutas is concealed and not directly observable. However, it can be deduced based on its particular effects. For instance, when we observe the qualities of Ushnata and Visyandata, we can infer the presence of the Agni and Jala Mahabhutas, respectively, in the formation of Lavana rasa. The comprehension of such effects is accessible primarily through scripture and not within the grasp of the average person. It is stated that just as Mahabhu-

taslike Jala do not individually exhibit their own distinct rasa like Prithvi and others, similarly, combinations like Jala and Vayu do not give rise to different rasas. This is because it is the inherent nature of the Mahabhutas that determines the manifestation of Rasa as explained in the texts. This indicates that these Mahabhutas possess an inherent capacity to generate rasa like Madhura etc. through their specific combinations, thereby influencing various outcomes.

षड्ऋतुकत्वेनकालोनानाहेमन्तादिरूपतयाकश्चिद्‌तविशेषंकचिद्वर्धयति, सचात्मकार्यरसंपुष्टंकरोति, यथा-हेमन्तकालेसोमगुणातिरेकोभवति, शिशिरेवाय्वाकाशातिरेकः, एवंतस्याशितीयोक्तरसोत्पादक्रमेणवसन्तादाव पिभूतोत्कर्षोज्ञेयः; षड्ऋतुकाच्चेतिचकारेणाहोरात्रकृतोऽपिभूतोत्कर्षोज्ञेयः, तथाऽदृष्टकृतश्च; तेनहेमन्तादावपिरसान् तरोत्पादःकचिद्वस्तुन्युपपन्नोभवति। (Chakrapani Commentary on C.S.Su.26/40)

The influence of the six seasons on tastes leads to the enhancement of a particular taste in each respective season, ultimately nourishing the body. For example, the dominance of jala Mahabhuta is prominent during Hemantarutu, while Vayu and Akasha Mahabhutas prevail in Shishirarutu. This pattern of varying Mahabhuta dominance in different seasons is explained in the chapter titled 'Tasyashitiyaadhyaya' of Charaka Samhita. The use of 'cha kara' in the phrase 'Shadrutukatvat cha' suggests that the variation in Mahabhutas is not limited to seasons but also applies to different times of the day, night (Ahoraatra) and other concealed states. The term 'Adrasta' implies the formation of unique tastes in various seasons.

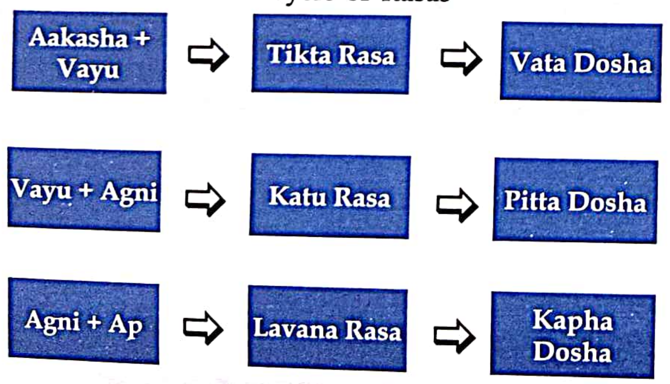
Note:

Dr. S. C. Dhyani published a paper in Ayu presenting an original concept 'the evolution of Rasas Vis a Vis life'.

In his theory, he suggests three cycles of Rasa evolution, they are as follows:

- The first cycle involves the evolution of Rasas such as Tikta, Katu and Lavana, which are responsible for initiating the three doshas to start life.

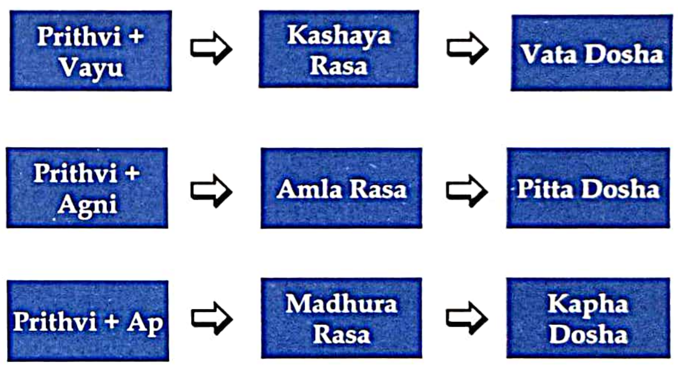
I Cycle of Rasas



The initial combination of the Mahabhutas occurred in a sequential order of evolution. Initially, Aakasha combined with Vayu, resulting in Tikta rasa, which gave rise to Vata dosha, akin to the first nucleotide base. Subsequently, Vayu combined with Agni, leading to Katu rasa, which in turn caused Pittadosha, akin to second nucleotide base. Finally, Agni combined with Ap, giving rise to Lavana rasa, which caused Kapha dosha, akin to the third nucleotide base. This initial cycle generated three rasas, ultimately giving rise to the three doshas and life.

- The second cycle involves the evolution of Rasas such as Kashaya, Amla and Madhura rasa that are responsible for strengthening the doshas formed at the first cycle. This process contributes to the cell becoming a self-organizing unit.

II Cycle of Rasas

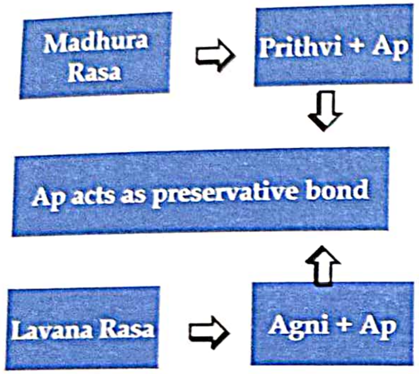


The Prithvi Mahabhuta, known for providing stability to the cell, sought to form chemical bonds with the other Mahabhutas. Initially, Prithvi attempted to combine with Aakasha, but their molecular interaction was impossible since Aakasha, being all pervading (Vibhu), could not form a molecular combination with Prithvi.

Subsequently, Prithvi formed a combination with Vayu, resulting in Kashaya rasa, which gave rise to Vata dosha. Then, Prithvi combined with Agni, leading to Amla rasa and the emergence of Pitta dosha. Finally, Prithvi combined with Ap, resulting in Madhura rasa and the formation of Kaphadosha.

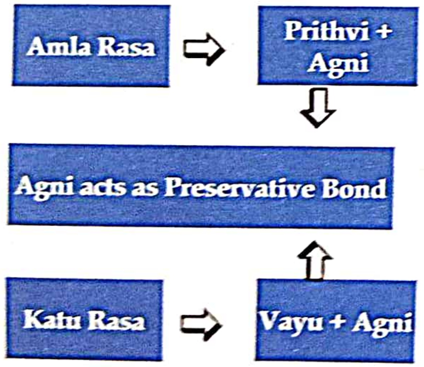
The Rasas formed in the I cycle serve as preservatives to the Rasas of the II cycle, but reverse is not true.

- Lavana rasa act as preservatives for Madhurarasa.



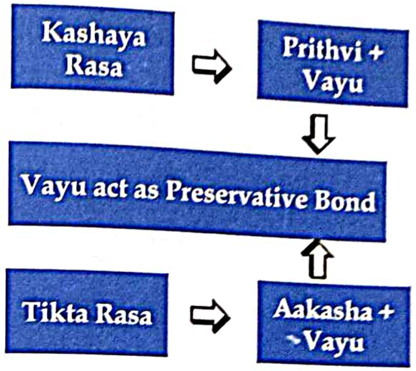
Here, Ap Mahabhuta act as a preservative bond. If this bond breaks, the Prithvi and Agni Mahabhuta combines to produce Amlarasa. Hence, when sweet substances spoiled turns sour.

- Katu rasa act as preservatives for Amlarasa.



Here, Agni Mahabhuta act as a preservative bond. If this bond breaks, the Prithvi and Vayu Mahabhuta combines to produce Kashaya rasa. Hence, when sour substances spoiled turns Kashaya rasa (Astringent).

- Tikta rasa act as preservatives for Kashaya rasa.

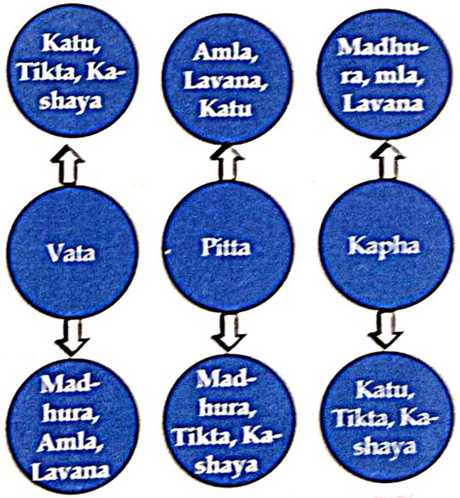


Here, Vayu Mahabhuta act as a preservative bond. If this bond breaks, the association of Prithvi and Akasha Mahabhuta will not produce any other rasa as there is no rasa formed with this combination.

- The third cycle signifies the interrelation among the three doshas at the physiological level, facilitating the overall harmonious functioning of the body. This makes the living organism into self-informing and self-regulating organization of cells.

  The relationship of three rasas with the increase or decrease of each dosha are as follows:

III Cycle of Rasas



Panchabhoutika Constitution of Shadrasa

All the substance of the universe is made up of Panchamahabhuta. Hence, there is no substance having only one rasa because of the combination of the Bhutas.

तेषां षण्णांरसानांसोमगुणातिरेकान्मधुरोरसः, पृथिव्यग्निभूयिष्ठत्वादम्लः, सलिलाग्निभूयिष्ठत्वाल्लवणः, वाय्वग्निभूयिष्ठत्वात्कटुकः, वाय्वाकाशातिरिक्तत्वात्तिक्तः, पवनपृथिवीव्यतिरेकात् कषाय इति| (C.S.Su.26/40)

Among the six Rasas, Madhurarasa is composed of Soma Guna (Jala Mahabhuta), Amlarasa by Prithvi and Agni, Lavanarasa by Salila (Jala) and Agni, Katurasa by Vayu and Agni, Tiktarasa by Vayu and Aakasha and Kashayarasa by Pavana (Vayu) and Prithvi.

तत्र भूम्यम्बुगुणवाहुल्यान्मधुरः, भूम्यग्निगुणवाहुल्यादम्लः, तोयाग्निगुणवाहुल्याल्लवणः, वाय्वग्निगुणवाहुल्यात्कटुकः, वाय्वाकाशगुणवाहुल्यात्तिक्तः, पृथिव्यनिलगुणवाहुल्यात् कषाय इति | (S.S.Su.42/3)

Madhura rasa contains the qualities of Bhumi (Prithvi) and Ambu (Jala) Mahabhuta. Amla rasa arises due to the predominance of Bhumi (Prithvi) and Agni Mahabhuta qualities. Lavana rasa primarily exhibits the qualities of Toya (Jala) and Agni Mahabhuta. Katu rasa results from the dominant qualities of Vayu and Agni Mahabhuta. Tikta rasa emerges when Vayu and Aakasha Mahabhuta qualities predominant and Kashaya rasa has dominant qualities of Prithivi and Anila (Vayu).

तत्रभूजलयोर्वाहुल्यान्मधुरो रसः| भूतेजसोरम्लः जलतेजसोर्लवणः| वाय्वाकाशयोस्तिक्तः| वायुतेजसोःकटुकः| वायूर्व्योःकषायः|| (A.S.Su.18/3)

Madhura rasa is formed by the predominance of Bhoo (Prithvi) and Jala, Amla rasa by Bhoo (Prithvi) and Tejas (Agni), Lavana rasa by Jala and Tejas, Tikta rasa by Vayu and Aakasha, Katu rasa by Vayu and Tejas, Kashaya rasa by Vayu and Urvi (Prithvi).

क्ष्माम्भोग्निक्ष्माम्वुतेजःखवाय्वग्न्यनिलगोनिलैः | द्वयोल्वणैः क्रमाद् भूतैर्मधुरादिरसोद्भवः|| (A.H.Su.10/1)

Madhuraadi Rasas get formed from the predominance of two Mahabhutas as follows: Madhura rasa by Kshma (Prithvi) and Ambhu (Jala), Amla rasa by Agni and Kshma (Prithvi), Lavana rasa by Ambu (Jala) and Teja (Agni), Tikta rasa by Kha (Aakasha) and Vayu, Katu rasa by Agni and Anila (Vayu), Kashaya rasa by Go (Prithvi) and Anila (Vayu).

तत्र पृथिव्यपां वाहुल्यान्मधुरं विद्यात्।अम्लमपामग्नेश्च।लवणमग्नेरपांच। कटुकमग्नेर्वायोश्च।तिक्तं खस्य वायोश्च।कषायमवनेर्वायोश्च। (Rasavaisheshika 3/38-43)

Among the Rasas, Madhura should be understood with the predominance of Prithvi and ap, Amla rasa as the result of the predominance of Ap and Agni, Lavana rasa as the result of the predominance of Agni and Ap, Katu rasa as the result of the predominance of Agni and Vayu, Tikta as the result of the predominance of Kha (Aakasha) and Vayu, Kashaya as the result of the predominance of Avani (Prithvi) and Vayu.

लवणेऽग्निरधिकः अम्ले त्वापःऽपि अधिकाःऽपि | (Commentary on Rasavaisheshika 3/40)

In Amlarasa, Jala is more predominant and in Lavana, Agni is more predominant.

S. No.	Name of the Rasa	Predominance of Rasa				
		Charaka	Susrutha	Astanga Sangraha	Astanga Hridaya	Rasa vaisheshika
1	Madhura	Soma (Jala)	Bhumi (Prithvi) + Ambu (Jala)	Bhoo (Prithvi) + Jala	Kshma (Prithvi) + Ambhu (Jala)	Prithvi + ap
2	Amla	Prithvi +Agni	Bhumi (Prithvi) + Agni	Bhoo (Prithvi) + Tejas (Agni)	Agni + Kshma (Prithvi)	Ap + Agni
3	Lavana	Salila (jala)+ Agni	Toya(Jala) + Agni	Jala + Tejas	Ambu (Jala) + Teja (Agni)	Agni + Ap
4	Katu	Vayu + Agni	Vayu + Agni	Vayu + Tejas	Agni + Anila (Vayu)	Agni + Vayu
5	Tikta	Vayu + Aakasha	Vayu + Aakasha	Vayu + Aakasha	Kha (Aakasha) + Vayu	Kha (Aakasha) + Vayu
6	Kashaya	Vayu + Prithvi	Prithivi + Anila (Vayu)	Vayu + Urvi (Prithvi)	Go (Prithvi) + Anila (Vayu)	Avani (Prithvi) + Vayu

4.4. Rasopalabdhi and Pathway of Taste Perception & Sites of Taste Receptors in the Body

Rasopalabdhi :

रसो निपाते द्रव्याणां ....| (C.S.Su.26/66)

Rasa can be determined immediately when a substance comes in contact with the tongue.

निपात इति रसनायोगे|...द्रव्याणामिति उपयुज्यमानद्रव्याणाम्| (Chakrapani Commentary on C.S. Su.26/66)

The term 'Nipata' signifies that the Rasa (taste) is immediately experienced upon contact with the tongue. The term 'Dravyanam' denotes beneficial medicinal substances.

द्रव्याणामभ्यवह्रियमाणानांमुखेरसनायांनिपातेरसोमधुरादिःउपलभ्यते। (Gangadhara Commentary on C.S.Su.26/66)

The sense of taste is experienced when ingested substances come into contact with the tongue in the mouth.

रसंविद्यान्निपातेन...| (A.S.Su.17/26)

The taste of the substance becomes apparent as soon as it touches the tongue.

जिह्वानिपातेनस्पर्शमात्रेणरसविशेषंविद्याद्द्रव्यस्य| (Indu Commentary on A.S.Su.17/26)

By the mere touch of the tongue with a substance, the specific taste of a substance is known.

प्रत्यक्षतोऽनुमानतःउपदेशतश्च रसानामुपलब्धिः। (Rasavaisheshika 3/114)

Bhadanta Nagarjuna mentions that the understanding of the rasa is done by Pratyakshya (direct contact), Anumana (inference) and Upadesha (by advice).

Bhashya- आस्वाद्य प्रत्यक्षत उपलभ्यन्ते।, अनुमानात् पूर्वोक्तं लिङ्गं दृष्ट्वा मधुरोऽयमाम्लोऽयमित्युपलभ्यते।आगमात् त्कषायंमधु, मधुरमुदकमित्यादि। अथवा आस्वादतः प्रत्यक्षतः रसानां सामान्यत उपलब्धिर्भवति। अनुमानाल्लिङ्गपूर्वाद्विशेषोपलब्धिर्भवति, उपदेशतः कर्मणि रसानां प्रवृत्तिरुपलभ्यत इति। अथवा सर्वत्रास्वादत एव रसो न गृह्यते, आगमतश्च क्वचित्, क्वचिदनुमानाच्चेति।"शीतं कषायं मधुरं विषघ्नं वर्ण्यं च मेधास्मृतिवर्धनं च। रसायनीयं लघुरुक्षमुक्तं, कषायतिक्तं लघुरुप्यमाहुः॥" इति तत्रास्वादतो न लभ्यत इति | (Commentary on Rasavaisheshika 3/108)

In the commentary (Bhasya) of Rasavaisheka, it is mentioned as follows -

- Through Pratyaksha, taste is directly perceived.
- Through Anumana, taste is determined by observing the previously mentioned certain characteristics or signs and concluding it as particular rasa like Madhura etc.

- Through Upadesha, the information as described in Aagama (Scriptures), one can perceive the knowledge of taste. For example, Kashaya rasa of Madhu, Madhura rasa of Udaka etc. are known through Aaptopadesha.

Alternatively, various types of taste perception can occur through different means as follows:

- General knowledge of taste (Samanyata Upalabdhi) is acquired through Pratyaksha (by direct perception).
- Specific knowledge of taste (Vishesha Upalabdhi) based on specific characteristics or signs is obtained through Anumana (by direct perception).
- Practical knowledge of Rasa is obtained through Upadesha (by Authentic testimony) by observing the effects or actions mentioned in the scriptures .

Sometimes Rasa is not universally perceived through Pratyaksha, but rather it is known through Aagama in some cases and through Anumana in others.

Example : Assessing the rasa of Swarna (Gold) is challenging through Pratyaksha and Anumana. But, when classical literatures are reviewed, we find references to its rasa as Kashaya and Madhura.

Current Techniques Developed to Determine the Rasa of the Drug -

A) Taste determination of the substance by taste threshold method :

The method of determination of taste threshold is described by Dr Shiva Charan Dyani in the book named 'Rasapanchaka'.

The various methodologies of determination of taste threshold are as follows:

1) In Cold water: This method involves dissolving 5 grams of drug powder in 100ml of cold water and stirring for 30 minutes, followed by filtration. 1 ml of the filtered solution is gradually dilute with water. At different stages of dilution, taste of small amounts of the diluted solution is tested. The point at which person no longer perceive the taste indicates the taste threshold for that particular taste in the drug. Further dilution beyond this point will render the solution tasteless.

   In cases where volunteers have varying perceptions of a drug's taste or when a drug exhibits two tastes of equal intensity, the rasa with the higher threshold value in that drug will be designated as its primary rasa, while the other will be identified as the secondary rasa.

2) In Hot water: Some drugs contain volatile oils that influence their taste. To account for this, the threshold values were determined in hot water as well. The methodology is same as cold water methodology, but, in place of cold

water usage replacing it with hot water in the methodology. If the threshold values are higher in cold water, the drug is recommended for administration with cold water. Conversely, if the threshold values are higher in hot water, the drug is advised to be taken with hot water.

3) Threshold value 6 hours after boiling: The methodology is similar to the hot water methodology, but, in this the solution is reduced to 50 ml and allowing a 6 hour gap before proceeding with the test. This gap accounts for potential re-precipitation of certain fractions when the solution cools down, affecting the threshold.

4) Threshold value in 1% saline solution: This experiment assesses the effect of Lavana on the threshold of drug tastes. The method is same cold water, but 1% saline solution is used instead of cold water. The rest of the procedure remains unchanged.

5) Threshold in 1 % Glucose solution: This experiment determines whether the addition of other rasa suppresses the original taste of the drug. It follows the same procedure as cold water method, but 1 % glucose solution is used instead of a cold water.

B) Nuclear Magnetic Resonance (NMR):

Each substance possesses a unique Panchabhautik configuration, which can be linked to the drug's metabolomics. This correlation may offer valuable insights into establishing chemosensory criteria for specific rasa. Metabolomics plays a significant role in predicting and elucidating intricate characteristics within various biological systems. This field focuses on investigating the chemical processes associated with metabolites, which encompass the small molecule substrates, intermediates and outcomes of metabolism.

Nuclear magnetic resonance (NMR) based metabolomics holds significant relevance in the realm of plant science. It finds applications in functional genomics and aids in distinguishing between plants of diverse origins or those subjected to various treatments. This protocol outlines the key steps involved in plant metabolomics utilizing NMR spectroscopy.

C) E-tongue

E-tongue is an analytical tool for the assessment of rasa of medicinal plants. The primary method of perceiving the taste of a substance is through the act of tasting it with our own tongue, using our sense of taste. However, this approach can be highly risky when dealing with toxic material or unapproved molecules, especially in the context of Food and Drug Administration (FDA) testing. As a safer alternative, an analytical taste sensing multichannel sensory system known as the electronic tongue (e-tongue or artificial tongue) has been developed to evaluate taste. This technology is gradually replacing the need for human sensory panels, offering advantages such as reduced reliance on human judgment.

A study conducted by Jayasundar R et al. In 2016 utilized an E-tongue analytical tool to determine the rasa of various medicinal plants, suggesting its applicability to other plants as well. Additionally, this technology has a wide range of potential applications, including Quantifying the taste masking effectiveness of pharmaceuticals, Analysing the taste related stability of medicines, Identifying toxic substances, Detecting drugs and explosives, monitoring the quality of herbal medicine, Identifying and quantifying the unpleasant taste of pharmaceuticals, Quantifying taste and food recognition in various substances.

Pathway of Taste Perception:

This process includes following steps:

1. Mechanism of stimulation of Taste buds - Receptor potential
2. Generation of nerve impulses by the taste bud
3. Transmission of taste signals into the central nervous system

Mechanism of stimulation of Taste buds - Receptor potential:

The membrane of the taste cells (type III cells of taste buds) are similar to many other sensory receptor cells, maintains a negative charge inside compared to the outside. When a taste substance comes in contact with the taste hairs, it leads to a partial reduction of the negative charge, causing depolarization of the taste cell. This change (decrease) in electrical potential in the taste cell is referred to as the receptor potential for taste, is approximately proportional to the logarithm of concentration of the stimulating substance.

Stimulating substances typically initiate the receptor potential by binding to a protein receptor on the outer surface of the taste receptor cell, often protruding through a villus membrane. This action opens ion channels, permitting sodium or hydrogen ions to enter and depolarize the cell.

The specific type of receptor protein present in each taste villus determines the type of taste that will be perceived.

Taste transduction is the process in which taste receptor converts chemical energy into action potentials in the taste nerve fibre.

Generation of Nerve Impulses by the Taste Bud

When a taste stimulus is first applied, the discharge of the nerve fibres from taste buds quickly peak within seconds but then adapt, returning to a lower, steady level as long as stimulus persists. This results in an initial strong signal followed by a milder continuous one as long as the taste bud senses the stimulus.

Transmission of Taste Signals into the Central Nervous System

- **First Order Neuron**

The taste pathway's first- order neurons are located within the nuclei of three distinct cranial nerves.

- ➢ Taste impulses originating from the anterior two-thirds of the tongue initially travel through the lingual nerve, then proceed via the chorda tympani into the facial nerve, ultimately reaching the tractus solitarius within the brainstem.
- ➢ Taste sensations stemming from the circumvallate papillae at the back of the tongue and other posterior areas of the mouth and throat follow a similar path, but they are transmitted through the glossopharyngeal nerve, to the tractus solitarius but at a slightly posterior level.
- ➢ Additionally, a few taste signals from the base of the tongue and other regions of the pharyngeal area make their way into the tractus solitarius through the vagus nerve.

All taste fibres converge and synapse in the posterior brainstem (medulla oblongata), specifically within the nuclei of the tractus solitarius.

- **Second Order Neuron**

The nuclei of the tractus solitarius contains the second order neurons. The axons of the second order neurons run through medial lemniscus and send a signal to ventral posterior medial nucleus of the thalamus.

- **Third Order Neuron**

Third order neurons are present in the ventral posterior medial nucleus of the thalamus. It relay the taste signals from the thalamus to the lower tip of the postcentral gyrus in the parietal cerebral cortex.

- **Taste centre**

The centre responsible for taste sensation is located in the opercular insular cortex, specifically in the lower part of the postcentral gyrus. Interestingly,

this region also processes cutaneous sensations from the face. As a result, taste fibres do not possess a separate and independent cortical projection.

The brainstem plays a central role in integrating taste reflexes. Within the brainstem, numerous taste signals from the tractus solitarius are directly transmitted to both the superior and inferior salivatory nuclei. These nuclei, in turn, send signals to the submandibular, sublingual and parotid glands, regulating the secretion of saliva to facilitate the process of ingesting and digesting food.

Sites of Taste Receptors in the Body:

Taste or gustatory sensations are mediated by specialized sensory organs known as taste buds. These taste buds are typically ovoid shaped and measure between 50 to 70 micrometres in diameter. In adults, approximately 10,000 taste buds can be found, while this number tends to be higher in children. However, beyond the age of 45 years, many taste buds undergo degeneration, resulting in a decreased sensitivity to taste.

The majority of taste buds are located on the papillae of the tongue. Additionally, taste buds can be found within the mucosa of the epiglottis, palate, pharynx and the proximal part of supporting cells embedded in the epithelial covering of oesophagus.

Three types of papillae (where taste buds are found) located on the tongue are as follows:

1) Circumvallate papillae- are large structures present on the posterior one-third part of the tongue. The number of this papillae are many, are arranged in the inverted V shape. Large number of taste buds are present on the walls of the circumvallate papillae.
2) Fungiform papillae- are round in shape, are situated over the anterior two-thirds of the tongue, moderate numbers of taste buds are present on the fungiform papillae.
3) Filiform papillae- are situated on the lateral surfaces of the tongue, less numbers of taste buds are present on the filliform papillae.

The precise chemical compounds that trigger various taste receptors are not fully understood. Nevertheless, through psychophysiological and neurophysiological investigations, researchers have identified at least 13 probable chemical receptors within taste cells. These receptors encompass: 2 receptors for sodium, 2 for potassium, 1 for chloride, 1 for adenosine, 1 for inosine, 2 for sweetness, 2 for bitterness, 1 for glutamate and 1 for hydrogen ions.

Taste Receptors:

Taste sensation receptors are chemoreceptors, which are stimulated by substances dissolved in saliva within the mouth.

Generally, the taste receptor is a G protein coupled receptor (GPCR), also known as G protein gustducin. However, various other receptors play roles in taste sensation, each with distinct transduction mechanisms.

1) Sweet receptor - G protein coupled receptor (GPCR)
2) Salt receptor - Epithelial sodium channel (ENaC)
3) Sour receptor - Epithelial sodium channel (ENaC)
4) Bitter receptor - G protein coupled receptor (GPCR)
5) Umami receptor - metabotropic glutamate receptor (mGluR4).

Remarkably, following their identification on the tongue, taste receptors, in conjugation with various taste signal transduction molecules, have been found to be expressed in numerous locations outside the oral cavity, including the stomach, intestines, liver,pancreas, respiratory system, heart, brain, kidney, urinary bladder, adipose tissue, testis, spermatozoa, lymphocytes and endocrine glands. Considering this extensive distribution of taste receptors, an intriguing conclusion emerges : taste receptors appear to be present throughout the entire body.

4.5. RASA - LAKSHANA, GUNA & KARMAS OF EACH RASA ON DOSHA, DHATU AND MALA

Madhurarasa:

स्नेहनप्रीणनाह्लादमार्दवैरुपलभ्यते| मुखस्थो मधुरश्चास्यं व्याप्नुवँल्लिम्पतीव च|| (C.S.Su.26/74)

तत्र, यः परितोपमुत्पादयति प्रह्लादयति तर्पयति जीवयति मुखोपलेपं जनयति श्लेष्माणं चाभिवर्धयति स मधुरः| (S.S.Su.42/9)

तेषांस्वादुरास्वाद्यमानो मुखमुपलिम्पतीन्द्रियाणि प्रसादयति| देहंप्रह्लादयति| षट्पदपिपीलिकादीनाम-भीष्टतमः| (A.S.Su.18 /4)

तेषां विद्याद्रसं स्वादु यो वक्त्रमनुलिम्पति | आस्वाद्यमानो देहस्य ह्लादनोऽक्षप्रसादनः||

प्रियः पिपीलिकादीनाम् .... | (A.H.Su.10/ 2-3)

लिङ्गंपुनर्मधुरस्य ह्लादनं, श्लेष्मजननं, कण्ठतर्पणं च| (Rasavaisheshika.3/18)

Madhurarasa has following Characteristics:

- Snehana - Unctuousness
- Preenana - nourishment
- Aahlaadana / Prahladayati / dehasyahlaadana / hlaadana - brings happiness/ delight / joy / Refreshing / Pleasing / sense of wellbeing
- Maardava - Softness
- Parithoshamutpadayati - creates satisfaction / generates contentment Tarpayathi - act of satisfying / to gratify
- Jeevayathi - sustains the life
- Aasyamvyapnuvan limpathi / Mukhopalepam janayathi / vaktramanulimpathi Aaswadyam ano - by placing it in the mouth, it spreads throughout the entire oral cavity, creating a coating-like sensation.
- Shleshaanamchabhivardhayathi / shleshmajanana- increases shleshma production
- Akshaprasaadana - provides nourishment to the sense organs / revitalizing /soothing the sense organ
- Priyahapipilikaadhinam -liked by ants etc.
- Kantatarpana - Pleasing to throat

Amlarasa:

दन्तहर्षान्मुखास्रावात् स्वेदनान्मुखबोधनात् | विदाहाच्चास्यकण्ठस्य प्राश्यैवाम्लं रसं वदेत्|| (C.S. Su.26/75)

यो दन्तहर्षमुत्पादयति मुखास्रावं जनयति श्रद्धां चोत्पादयति सोऽम्लः| (S.S.Su.42/9)

अम्लस्तु जिह्वामुद्वेजयत्युरःकण्ठं विदहति| मुखं स्रावयत्यक्षिभ्रुवं सङ्कोचयति दशनान हर्षयति रोमाणि च| (A.S.Su.18 /4)

अम्लः क्षालयते मुखम्| हर्षणो रोमदन्तानामक्षिभ्रुवनिकोचनः|| (A.H.Su.10/ 3)

हृद्यत्वं दन्तहर्षः प्रस्रावणं प्रक्लेदनं चाम्लस्य | (Rasavaisheshika 3/18)

Amlarasa has following Characteristics:

- Dantaharsha - Hyperesthesia of teeth
- Romaharsha - Horipulation
- Mukhasrava - Cleans the mouth
- Kshalayate mukham - Excessive salivation
- Swedana - induces Sweating
- Mukhabodhanat - Clarity in the oral cavity
- Vidaahaat Aasyakantasya - Burning sensation in the mouth and throat
- Shraddhamutpadayathi - desire to eat
- Akshinikochana - closing of eyes lids
- Bhruvanikochana - constriction of eyebrows

- Prasraavana - Increase watery secretions in mouth resulting in the conclusion of moisture in oral cavity.
- Prakledana - an agent that increase moisture of oral cavity.

Lavanarasa:

प्रलीयन्क्लेदविष्यन्दमार्दवं कुरुते मुखे । यः शीघ्रं लवणो ज्ञेयः स विदाहान्मुखस्य च॥ (C.S.Su.26/76)

यो भक्तरुचिमुत्पादयति कफप्रसेकं जनयति मार्दवं चापादयति स लवणः। (S.S.Su.42/9)

लवणो मुखं विष्यन्दयति कण्ठकपोलं विदहति अन्नं प्रोचयति। (A.S.Su. 18 /4)

लवणः स्यन्दयत्यास्यं कपोलगलदाहकृत् । (A.H.Su.10/ 4)

लवणस्यविसरणमुष्णत्वंप्रसेचनंच । (Rasavaisheshika 3/18)

Lavanarasa has following characteristics:

- Shigrampraleeyan - it dissolves quickly
- Kledam kuruthe mukhe- produces moisture in oral cavity
- Visyandanamkuruthemukhe / syandayathiaasyam- causes dripping/ oozing in the oral cavity
- Maardavamkuruthemukhe / Maardavamapaadayathi - causes softness in the mouth
- Vidaahaan Mukhasya - burning sensation in the mouth
- Bhakta ruchimutpaadayathi - enhance taste in the food
- Kaphaprasekam janayathi - increases kapha
- Kapola gala daahakrit - burning sensation in the cheeks and throat
- Visarana - it quickly spreads throughout the system
- Ushnatva - heat producing
- Prasechana - draws moistare to the area of contact making it moist

Tiktarasa:

प्रतिहन्ति निपाते यो रसनं स्वदते न च । स तिक्तो मुखवैशद्य शोष प्रह्लादकारकः ॥ (C.S.Su.26/78)

यो गले चोषमुत्पादयति मुखवैशद्यं जनयति भक्तरुचिं चापादयति हर्षं च स तिक्तः । (S.S.Su.42/9)

तिक्तो विशदयति वदनं विशोधयति कण्ठं प्रतिहन्ति रसानाम्। (A.S.Su. 18 /4)

तिक्तो विशदयत्यास्यं रसनं प्रतिहन्ति च॥ (A.H.Su.10/ 4)

तिक्तस्य हर्षणं चहरिमता शैत्यं आस्यस्य गलद्वारशोषणं च । (Rasavaisheshika 3/18)

Tiktarasa has following characteristics:

- Pratihanthi nipaathey or asanam / rasanam prathihanthi- when it comes in contact with tongue it destroys the ability of tongue to perceive other taste / it masks the perception of other tastes

- Svadate Na - tastes unpleasant / not delicious
- Mukhavaisadyaka araka / Vishadayathiaasyam - purifies /cleanses the mouth
- Shoshakaaraka - dries the mouth and throat
- Prahladakaaraka - delightfulness
- Chosham utpadayathi - drying of the mouth
- Bhakta ruchimaapadayathi - increases taste in the food
- Harsham cha aapadayathi / Harshana - causes displeasure / people won't desire to take bitter substances
- Harimataa - feeling of green in the end of palate
- Shaityamaasyasya - makes the mouth feel cold
- Galadwarashoshana - dries the throat

Katurasa:

संवेजयेद्यो रसानां निपाते तुदतीव च । विदहन्मुखनासाक्षि संस्रावी स कटुः स्मृतः॥ (C.S.Su.26/77)

यो जिह्वाग्रं बाधते उद्वेगं जनयति शिरो गृह्णीते नासिकां स्रावयति स कटुकः । (S.S.Su.42/9)

कटुको भृशमुद्वेजयति जिह्वाग्रं चिमिचिमायति कण्ठकपोलं स्रावयति मुखाक्षिनासिकं विदहति देहम्। (A.S.Su.18 /4)

उद्वेजयति जिह्वाग्रं कुर्वंश्चिमिचिमां कटुः। स्रावयत्यक्षिनासास्य कपोलौ दहतीव च॥ (A.H.Su.10/ 5)

कटोर्जिह्वाघ्राणबाधउद्वेगोनासास्रावःशिरोग्रहश्च । (Rasavaisheshika 3/18)

Katurasa has following characteristics:

- Samvejayathirasaanaam- causes irritation in the tongue
- Nipaathe Tudathiiva - prickling pain in the tongue
- Vidahan mukha nasa akshi samsravi / Sraavayathi akshinaasaaasya/ Sraavayathi mukha akshinaasikam- it causes excessive secretions or watering in the mouth, nose and eyes
- Jihwaagrambaadathe / Udvejayathijihvaagram/ Bhrishamudvejayathijihvagram- over stimulates the tip of the tongue
- Udwegamjanayathi / Udwega- causes discomfort / hate, cannot take too much
- Shiro gruhnaathi / Shirograha - stiffness of the head
- Naasikaamsraavayathi/ Naasasraava- produces oozing through the nose
- Kurvamschimichimaam / Chimichimaayathikantakapolam - causes irritation in throat and cheeks

- *Kapalodahateeva* - causes burning sensation of the cheeks
- *Vidahathideham* - feeling of burning sensation in the body.
- *Jihvaghranabaadha* - irritates the tongue and nose

Kashayarasa:

वैशद्यस्तम्भजाड्यैर्यो रसनं योजयेद्रसः| बध्नातीव च यः कण्ठं कषायः स विकास्यपि|| (C.S.Su.26/79)

यो वक्त्रं परिशोषयति जिह्वां स्तम्भयति कण्ठं बध्नाति हृदयं कर्षति पीडयति च स कषाय इति|| (S.S. Su.42/9)

कषायस्तु जडयतिजिह्वांबध्नातिकण्ठंपीडयतिहृदयम्|| (A.S.Su.18 /4)

कषायोजडयेज्जिह्वांकण्ठस्रोतोविबन्धकृत्| (A.H.Su.10/ 6)

कषायस्यमुखपरिशोषःश्लेष्मसंवृत्तिर्गौरवंस्तम्भश्च। (Rasavaisheshika 3/18)

Kashayarasa has following characteristics:

- *Vaishadya - clearness of the tongue*
- *Stambha / Jihvastambhayathi-* causes stiffness of the tongue
- *Jadyatrasanam / Jadayetjihva-* slows down the functions of the tongue / *diminishes capacity of taste perception*
- *Kantham Badhnati / Kantasrotovibandhakrit* - causes constriction in the *passage in the throat.*
- *Vikaasyapi - cause loosening of body parts*
- *Vaktramparishoshayathi / Mukhaparishosha* - causes dryness of mouth
- *Hridayamkarshathi* - cause cardiac discomfort
- *Peedayathi / Peedayathihridayam* - causes cardiac distress
- *Shleshmasamvrutti* - solidification of kapha
- *Gaurava* - heaviness in the face area

Guna of each Rasa

The general description of the qualities of rasa are as follows:

गुणा गुणाश्रया नोक्तास्तस्माद्रसगुणान् भिषक्| विद्याद्द्रव्यगुणान् कर्तुरभिप्रायाः पृथग्विधाः||
(C.S.Su.26/36)

One Guna cannot exist within another Guna, hence, a physician should regard the Gunas of Rasa as qualities of substance itself.

तदाश्रयेषु च द्रव्यसंज्ञकेषु पृथिव्यादिषु गुणाः प्रकृतिविकृतिविचारदेशकालवशात् गुर्वादयो रसेषु साहचर्यादुपचर्यन्ते|| (A.Sa.Su.17/5)

The qualities such as Guru etc which are found in substances are belonging to Prthivyadi Bhutas. But by their nature, transformation, processing, region

and season, these qualities are attributed categorically to the rasas because of their coexistence (Saahacharyaat).

गुर्वादयो गुणा द्रव्ये पृथिव्यादौ रसाश्रये|| रसेषु व्यपदिश्यन्ते साहचर्योपचारतः| (A.H.Su.9/4)

Gurvadiguna taking shelter in Prithvyadi Dravya, where rasa also resides. This coexistence (Sahacharya) of Rasa and the Guna of Dravya may give the impression that the Guna of Dravya as the Guna of Rasa.

The Rasa and Anurasa may be one or more. They are described as having the qualities like Guru, Laghu, Sheeta, Ushna etc., but these are the qualities of Bhutas which are present in the substance.

In the nutshell, Rasa is a quality and within qualities, there cannot be another quality. Therefore, the qualities of Rasas are essentially properties inherent in the substances that support them. However, these qualities are attributed to the rasas through association with the substances.

सौम्याः शीताः, आग्नेया उष्णाः || (S.S.Su. 42 /7)

Saumya rasa such as Madhura, Tikta and Kashaya exhibit Sheetaguna, while, Agneya rasa such as Katu, Amla and Lavana are characterized by Ushnaguna.

लवणकषायमधुरा गुरवः| तद्वदम्लकटुकतिक्ता लघवः|| (A.S.Su.17/10)

Lavana, Kashaya and Madhura rasa possess Guruguna whereas Amla, Katu and Tikta Rasa possess Laghuguna.

तिक्तकटुकषाया रूक्षा.....लवणाम्लमधुराः स्निग्धा....| (A.S.Su.17/10)

Tikta, Katu and Kashaya Rasa has Rukshaguna whereas Lavana, Amla and Madhura Rasa contains Snigdhaguna.

The specific description of the qualities of each rasa are as follows:

Madhura rasa

तत्र, मधुरोरसः ...स्निग्धः शीतो गुरुश्च| (C.S.Su.26 / 43)

तत्र मधुरो रसो ...स्निग्धः शीतो मृदुर्गुरुश्च | (A.S.Su.18/5)

मधुर ...च शीतलाः....स्निग्धाः....मधुरः परमं गुरुः| (A.H.Su.10/38)

Madhura rasa has attributes such as Snigdha (unctous), Sheeta (cold), Guru (heavy) and Mridu (soft).

Amla Rasa

अम्लो रसो ....लघुरुष्णः स्निग्धश्च| (C.S.Su.26 / 43)

अम्लो ....व्यवायी लघुः स्निग्धो | (A.S.Su.18/6)

अम्ल ...वीर्येणोष्णा......स्निग्धाः...लघुरम्लः | (A.H.Su.10/38)

Amla rasa has attributes such as Laghu (light), Ushna (hot), Snigdha (unctous) and Vyavayi (spreads quickly).

Lavana Rasa

लवणो रसः....नात्यर्थं गुरुः स्निग्ध उष्णश्च| (C.S.Su.26 / 43)

लवणः ......नातिगुरुः स्निग्धतीक्ष्णोष्णश्च | (A.S.Su.18/7)

लवणा.....वीर्येणोष्णा....स्निग्धाः...पटु...परमं गुरुः| (A.H.Su.10/38)

Lavana rasa has attributes such as Naatyartha Guru (not too guru), Snigdha (unctous), Ushna (hot), and Teekshna (penetrating).

Katu Rasa

कटुको रसो ....लघुरुष्णो रूक्षश्च| (C.S.Su.26 / 43)

कटुको ....लघुरूक्षतीक्ष्णोष्णश्च| (A.S.Su.18/9)

रसाः कटु....वीर्येणोष्णा...कटुः....रूक्षा...लघु.. | (A.H.Su.10/38)

Katu rasa has attributes such as Laghu (light), Ushna (hot), Ruksha (dry) and Teekshna (penetrating).

Tikta Rasa

तिक्तो रसः ....रूक्षः शीतो लघुश्च| (C.S.Su.26 / 43)

तिक्तः ....नातिरूक्षः शीतो लघुश्च | (A.S.Su.18/8)

तिक्तः....शीतलाः....रूक्षा....लघु...तिक्तकः| (A.H.Su.10/38)

Tikta rasa has attributes such as Ruksha / Natiruksha (dry / not too dry), Sheeta (cold) and Laghu (light).

Kashaya Rasa

कषायो रसः ....रूक्षः शीतोऽलघुश्च| (C.S.Su.26 / 43)

कषायो....अतिरूक्षः| गुरु..हिमः| (A.S.Su.18/10)

कषायो...शीतलाः...कषायश्च रूक्षा...कषाय...परमं गुरुः | (A.H.Su.10/38)

Kashaya rasa has attributes such as Ruksha/Atiruksha (dry / too much dry), Sheeta / Hima (cold) and Alaghu / Guru (Heavy).

Relative superiority of tastes based on certain qualities:

रौक्ष्यात् कषायो रूक्षाणामुत्तमो मध्यमः कटुः | तिक्तोऽवरस्तथोष्णानामुष्णत्वाल्लवणः परः||
मध्योऽम्लः कटुकश्चान्त्यः स्निग्धानां मधुरः परः | मध्योऽम्लो लवणश्चान्त्यो रसः स्नेहान्निरुच्यते||
मध्योत्कृष्टावराः शैत्यात् कषायस्वादुतिक्तकाः | स्वादुर्गुरुत्वादधिकः कषायाल्लवणोऽवरः||

अम्लात् कटुस्ततस्तिक्तो लघुत्वादुत्तमोत्तमः | केचिल्लघूनामवरमिच्छन्ति लवणं रसम्||
गौरवे लाघवे चैव सोऽवरस्तूभयोरपि| (C.S.Su.26 /53 -57)

Rasas are categorized into 3 types i.e., Uttama (Superior / high), Madhyama (Moderate) and Avara (inferior / low) in relation to the predominant six attributes as follows:

Guna	Uttama	Madhyama	Avara
Ruksha	Kashaya	Katu	Tikta
Ushna	Lavana	Amla	Katu
Snigdha	Madhura	Amla	Lavana
Sheeta	Madhura (Swadhu)	Kashaya	Tikta
Guru	Madhura (Swadhu)	Kashaya	Lavana
Laghu	Tikta	Katu	Amla

Explain karma of each rasa on Dosha, Dhatu and Mala with Examples.

General actions of Rasa are as follows:

रसस्य तु छेदनोपशमने द्वे कर्मणी | हिताहितौ प्रभावौ || (A.S.Su.17/4)

Chedana (expulsion of the doshas) and Upashamana (alleviation or mitigation of the doshas) are the two actions of the rasa. Becoming good or bad for health are their Prabhava (special effects).

तिक्तकटुकषाया रूक्षा बद्धविण्मूत्रमारुताः | लवणाम्लमधुराः स्निग्धा सृष्टविण्मूत्रमारुताः|(A.S.Su.17/10)

तिक्तः कटुः कषायश्च रूक्षा बद्धमलास्तथा || पट्वम्लमधुराः स्निग्धाः सृष्टविण्मूत्रमारुताः| (A.H.Su.10/38)

Tikta, Katu and Kashaya Rasa causes obstruction to the movement of the faeces, urine and flatus. Lavana, Amla, Madhura rasa helps in elimination of the faeces, urine and flatus.

Specific actions of rasa are as follows:

Madhura rasa

Action exhibited by the Madhurarasa as described in the various literature are as follows:

तत्र, मधुरो रसः शरीरसात्म्याद्रसरुधिरमांसमेदोस्थिमज्जौजःशुक्राभिवर्धन आयुष्यः षडिन्द्रियप्रसादनो बलवर्णकरः पित्तविषमारुतघ्नस्तृष्णादाहप्रशमनस्त्वच्यः केश्यः कण्ठ्यो बल्यः प्रीणनो जीवनस्तर्पणो बृंहणः स्थैर्यकरःक्षीणक्षतसन्धानकरो घ्राणमुखकण्ठौष्ठजिह्वाप्रह्लादनो दाहमूर्च्छाप्रशमनः षट्पदपिपीलिकानामिष्टतमः स्निग्धः शीतो गुरुश्च| (C.S.Sa.Su.26/42 (1))

As Madhura rasa is wholesome to the body, it helps to increase the quality of tissues in the body, promote longevity, please the sense organs, enhances the strength and complexion of the individual, alleviate Pitta and Vata, detoxify the body, relieve thirst and burning sensations, good for skin and hairs, conducive to throat. Helps to nourish all the body parts, sustains the life, provides contentment, increases bulkiness of the body, provides stability. Additionally, it aids in healing emaciation and injuries. It is soothing to the nose, mouth, throat, lips and tongue and helps to relieve fainting. It is liked by ants. And has attributes like Snigdha, Sheeta and Guru guna.

रसगुणानत ऊर्ध्व वक्ष्यामः- तत्र, मधुरो रसो रसरक्तमांसमेदोऽस्थिमज्जौजःशुक्रस्तन्यवर्धनश्चक्षुष्यः केश्यो वर्ण्यो बलकृत्सन्धानः शोणितरसप्रसादनो बालवृद्धक्षतक्षीणहितः षट्पदपिपीलिकानामिष्टतमस्तृष्णामूर्च्छादाहप्रशमनः षडिन्द्रियप्रसादनः कृमिकफकरश्चेति | (S.S.Su.42/10)

Madhura rasa increases all the dhatus, ojas and breast milk. It is good for eyes, hairs and complexion. It enhances the strength, promotes tissue union, purifies the blood and plasma, and is particularly beneficial for children, aged persons and those who are emaciated. It is liked by ants, helps to subside thirst, relieve fainting and burning sensations. It is good for all the sense organs, it may also promote the growth of worms and increase the kaphadosha.

तत्र मधुरो रसो जन्मप्रभृति सात्म्यात्सर्वधातुविवर्धन आयुष्योबालवृद्धक्षतक्षीणबलवर्णेन्द्रियत्वक्केशकण्ठहितः प्रीणनो वृंहणो जीवनस्तर्पणः स्थैर्यसन्धानःस्तन्यकरो वातपित्तविषदाहमूर्च्छातृष्णाप्रशमनः स्निग्धः शीतो मृदुर्गुरुश्च| (A.S.Su.18/5)

Madhura rasa is accustomed to the body since birth. It promotes the growth and development of all the dhatus, prolongs lifespan, and is particularly helpful for children, aged person and those who are emaciated. It enhances the strength, complexion and sharpens the sense organs. It is beneficial for the skin, hairs and throat and nourishes all body parts, increases bulkiness and sustains the life. It provides contentment, stability and aids in tissue union. It also increases milk production and alleviates Vata and Pitta imbalances. It detoxify the body and pacifies burning sensation, faiting and thirst. Madhurarasa has properties such as Snigdha, Sheeta, Mridu and Guru guna.

.....मधुराः स्निग्धा सृष्टविण्मूत्रमारुताः | .....मधुरा गुरवः| (A.S.Su.17/10)

Madhura rasa has Snigdha and Guru Guna and it helps in easy elimination of faeces, urine and flatus.

.... मधुरो रसः | आजन्मसात्म्यात्कुरुते धातूनां प्रबलं बलम्|
बालवृद्धक्षतक्षीणवर्णकेशेन्द्रियौजसाम् || प्रशस्तो वृंहणः कण्ठ्यः स्तन्यसन्धानकृद्‌गुरुः|

आयुष्यो जीवनः स्निग्धः पित्तानिलविषापहः|| (A.H.Su.10/6-8)

Madhura rasa being accustomed since birth, it imparts greater strength to all the dhatus. It is highly valuable for children, aged person and those who are emaciated. It is beneficial for complexion, hairs, sense organs and ojas. It increases bulkiness, supports throat health, enhances milk production and aids tissue union. It has Guru and Snigdha Guna. It prolongs lifespan and sustains the life. Madhura rasa alleviates pitta and vata and detoxify the body.

मधुर ...च शीतलाः|...मधुराः स्निग्धाः सृष्टविण्मूत्रमारुताः|..मधुरः परमं गुरुः| (A.H.Su.10/38)

Madhura rasa has Shita, Snigdha and Guru Guna. It helps in easy elimination of faeces, urine and flatus.

माधुर्यस्नेहगौरवपैच्छिल्यमार्दवशैत्यैःश्लेष्माणंवर्धयतिमधुरः| (Rasavaisheshika 3/62)

Madhura rasa has Gunas such as Madhurya, Sneha, Paicchilya, Mardava and Shaitya. As all these properties are similar to Kapha, this Rasa will lead to increase in Kapha Dosha.

a. Commonly known name– Sweet
b. Panchamahabhuta Composition– Prithvi and Jala
c. General action or Karma– Madhurarasa is wholesome to the body, accustomed to the body since birth, act as antidote for poisons, soothing to the nose, mouth, throat, lips and tongue, sustains life, promotes lifespan (Ayushya),
d. Action on Dosha– increases Kapha dosha due to its properties like Snigdha, Sheeta and Guru. It helps in alleviation of Pitta dosha due to properties like Sheeta and Guru. Also, it helps in alleviation of Vata dosha, due to properties like Snigdha and Guru.
e. Action on Dhatu– it promotes the growth and development of all dhatus (Sarva Dhatu vivardhana), enhances the strength, nourishing all the body parts, increases bulkiness (Brihmana), provides stability (Sthairyakara).
f. Action on Upadhatu–good for hairs, increases lactation (Stanyavardhana)
g. Action on Mala –helps in easy elimination of faeces, urine (srishta vin mutra)
h. Systemic Action–
   - Nervous system– does contentment (Tarpana), relieves fainting (Murcha Prashamana)
   - Digestive system– pacifies the thirst (Trishna prashamana), produces worms (Krimikara), helps in easy elimination of flatus (Srishtamaaruta).

- Cardiovascular system - Muscals skeletal system, purifies Rakta and Rasa and arrest bleeding too.
- Respiratory system - conducive to throat (Kantya), heals up emaciation and Urakshata
- Urinary system - act as diuretic (Srishtamutra)
- Reproductive system - increases semen (Shukraabhivardhana)
- Sense organ - pleasing to all the sense organ (Shadindriyaprasadana), good for skin, improves good body complexion, reduces the burning sensation, good for eyes.
- Indication - good for children, aged persons, wounded and emaciated persons
- Other action - liked by ants

Example of Madhura Rasa Pradhana Dravya -

Plant origin - Guda, Ikshu, Parushaka, Bala, Jeevanthi, Madhuka, Kashmari

Animal origin - Gritha, Madhu

Mineral origin - Hema (Swarna)

Amlarasa

अम्लो रसो भक्तं रोचयति, अग्निं दीपयति, देहं वृंहयति ऊर्जयति, मनो वोधयति, इन्द्रियाणि दृढीकरोति, बलं वर्धयति, वातमनुलोमयति, हृदयं तर्पयति, आस्यमास्रावयति, भुक्तमपकर्षयति क्लेदयति जरयति, प्रीणयति, लघुरुष्णः स्निग्धश्च। (C.S.Su.26/42 (2))

Amla rasa enhances the taste of food and digestive fire. It increases bulkiness of the body, and gives energy to the body. This rasa enlightens the mind and strengthen the sense organs. It promotes the strength, aids downward movement of Vata, gives strength to the heart, stimulates salivation, eases swallowing, moistens the food, aids digestion of food, nourishes all the body tissues. It is having Laghu, Ushna and Snigdha guna.

अम्लो जरणः पाचनो दीपनः पवननिग्रहणोऽनुलोमनः कोष्ठविदाही बहिःशीतःक्लेदनः प्रायशो हृद्यश्चेति। (S.S.Su.42/10)

Amla rasa aids in digestion, improves appetite, controls vata, facilitates downward elimination of vata, may cause a burning sensation in the digestive tract, feels cold to the touch and causes moistness. Generally, it is good for heart.

अम्लोऽनिलवर्हणोऽनुलोमनः कोष्ठविदाही रक्तपित्तकृदुष्णवीर्यः शीतस्पर्शो बोधयतीन्द्रियाणि रोचनः पाचनोदीपनो वृंहणस्तर्पणः प्रीणनः क्लेदनो व्यवायी लघुः स्निग्धो हृद्यश्च। (A.S.Su.18/6)

Amla rasa pacifies Vata dosha and promotes its downward movement. It causes burning sensation and bleeding disorder. It has hot potency but feels cold to the touch, stimulates the sensory organ, improves the taste, aids digestion, enhances digestive fire, enhances the bulkiness of the body, provides contentment, nourishment and moistness to the body. It spreads all the parts rapidly. It has Laghu and Snigdhaguna, and good for the heart.

अम्ल .... स्नग्धिासृष्टवण्मूित्रमारुता। ....अम्ल...लघव। (A.S.Su.17/10)

Amla rasa has Snigdha and Laghu guna. It helps in easy elimination of faeces, urine and flatus.

अम्लोऽग्निदीप्तिकृत्स्निग्धो हृद्यः पाचनरोचनः। उष्णवीर्यो हिमस्पर्शः प्रीणनः क्लेदनो लघुः।।
करोति कफपितास्रं मूढवातानुलोमनः। (A.H.Su.10/10-11)

Amla rasa stimulates the digestive fire, has Snigdha and Laghu Guna, good for the heart, helps in proper digestion, enhances the taste, hot in potency, feels cold to the touch, provides nourishment and moistness to the body. It causes aggravation of Kapha, Pitta and Asra or Raktadhatu. It also facilitates the downward movement of Mudhavata.

अम्ल ...वीर्येणोष्णा...अम्ल...स्निग्धाः सृष्टविण्मूत्रमारुताः। ...लघुरम्लः । (A.H.Su.10/38)

Amla rasa has hot potency, Snigdha and Guru Guna, helps in easy elimination of faeces, urine and flatus.

कोपयतिक्लेदयतिचैनमम्लःऔष्ण्यात्तैक्ष्ण्याद्गौरवात्स्नेहाच्च। (Rasavaisheshika 3/65)

Amla rasa irritates and increases Kapha with its Teekshna and Ushna, Gaurava and Sneha guna.

पित्तस्यभृशविदाहित्वादुष्णत्वात्तीक्ष्णत्वाच्चविदाहयतिकोपयतिचाम्लः। (Rasavaisheshika 3/68)

Amla rasa causes severe aggravation of pitta because of Vidaahi nature, Ushna guna and teekshna guna.

a. Commonlyknownname– Sour
b. Panchamahabhuta Composition– Prithvi and Agni
c. General action or Karma– gives energy to the body (Urjayati)
d. Action on Dosha– alleviates Vata due to Snigdha guna and Ushna Veerya. It causes aggravation of Kapha due to Snigdha Guna. It also aggravates Pitta due to Ushna Veerya and Guna.
e. Action on Dhatu– increases bulkiness, nourishing all the body tissue, causes aggravation of Asra.
f. Action on Mala –helps in easy elimination of faeces, urine.

g. Systemic Action-

- Nervous system- Enlightens the mind (Manobhodayathi), provides contentment (Tarpana)
- Digestive system- Enhances the taste of food, Increases digestive power, helps for the downward movement of Vata (Mudhvata Anulomana), causes salivation, helps in swallowing, moistening and digestion of food, causes burning sensation inside alimentary canal.
- Cardiovascular system- gives strength to the heart (Hridayam Tarpayathi), generally good for heart (Prayasho Hridya), Causes bleeding disorder.
- Urinary system- Diuretic (srishta mutra)
- Sense organ- strengthen the sense organs (Indriyaani Drudikarothi), stimulates the sensory organ (Bodayathi Indriyaani)
- Other action- cold to touch (Sheeta Sparsha)

h. Example of Amla Rasa Pradhana Dravya -

Plant origin- Amalaki, Amlika, Matulunga, Amlavetasa, Dadima, Amra, Amrataka

Animal origin - Takra, Dadhi

Mineral origin - Rajata

Lavanarasa

लवणो रसः पाचनः क्लेदनो दीपनश्च्यावनश्छेदनो भेदनस्तीक्ष्णः सरो विकास्यधःस्रंस्यवकाशकरो वातहरः स्तम्भबन्धसङ्घातविधमनः सर्वरसप्रत्यनीकभूतः, आस्यमास्रावयति, कफं विष्यन्दयति, मार्गान् विशोधयति, सर्वशरीरावयवान् मृदूकरोति, रोचयत्याहारम्, आहारयोगी, नात्यर्थं गुरुः स्निग्ध उष्णश्च। (C.S.Su.26/42 (3))

Lavana rasa aids in proper digestion, helps in moistening, increases digestive fire, stimulates secretion and expectorant, produces breaking of mass, is Teekshna, Sara, Vikasi, promotes downward movement, creates space, pacifies Vata, removes stiffness, obstruction and compactness, overpower all the tastes. It causes salivation, Liquefies Kapha, clears the channels, softens all the body parts, enhances the food taste, is useful in food processing, and is neither too heavy. It is Snigdha and Ushna.

लवणः संशोधनः पाचनो विश्लेषणः क्लेदनः शैथिल्यकृदुष्णः सर्वरसप्रत्यनीको मार्गविशोधनः सर्वशरीरावयवमार्दवकरश्चेति। (S.S.Su.42/10)

Lavana rasa helps in cleansing, digestion, dissolution, moistening and it loosen body parts. It has Ushna Guna and suppresses all other tastes, cleanses the channels, and softens all the body parts.

लवणः स्तम्भबन्धसङ्घातविध्मापनः सर्वरसप्रत्यनीको दीपनो रोचनः पाचनः क्लेदनः शोषणः स्नेहनःस्वेदनो भेदनश्छेदनः सरो व्यवायी विकाषी हरति पवनं विष्यन्दयति कफं विशोधयति स्रोतांसि नातिगुरुः स्निग्धतीक्ष्णोष्णश्च। (A.S.Su.18/7)

Lavana rasa removes stiffness, obstruction, compactness, suppresses all other tastes. It induces hunger and enhances the taste, aids digestion, moistens, dries up, produces unctuousness, promotes diaphoresis, purgation, and causes excision effect, and causes the movement of liquid. It spreads rapidly, has Vikashiguna, mitigates Vata, causes liquefaction of Kapha, clears the tissue orifices. It is having Natiguru, Snigdha, Teekshna and Ushna Guna.

लवणा...स्निग्धा सृष्टविण्मूत्रमारुताः।...गुरवः। (A.S.Su.17/10)

Lavana rasa has Snigdha and Guru Guna, and helps in easy elimination of faeces, urine and flatus.

लवणः स्तम्भसङ्घातबन्धविध्मापनोऽग्निकृत् ॥ स्नेहनः स्वेदनस्तीक्ष्णो रोचनश्छेदभेदकृत्। (A.H. Su.10/12-13)

Lavana rasa removes the stiffness / rigidity, clears the obstructions of the channels, increases digestive fire, helps to lubricates, causes sweating, has Teekshna Guna, improves the taste of the food, causes expectorations and bursting of tissues, new growth, abscess etc.

लवणा.....वीर्येणोष्णा....पटु..स्निग्धाःसृष्टविण्मूत्रमारुताः। पटु...परमं गुरुः। (A.H.Su.10/38)

Lavana rasa has Ushna veerya, Snigdha and is regarded to possess a high degree of Guru Guna which helps in easy elimination of faeces, urine and flatus.

विष्यन्दयति चैनं लवणः। (Rasavaisheshika 3/66) Meaning- Causes kapha pratopa.

The Rasa will also result in the increase of Kapha due to moisture.

Lavana Rasa Liquefies Kapha.

a. Commonly known name- Salt

b. Panchamahabhuta Composition- Jala and Agni

c. General action or Karma- removes obstruction, removes compactness, clears the channels, softens all the body parts, helps in cleansing the body, causes looseness of the body.

d. Action on Dosha- pacifies Vata due to Snigdha, Ushna veerya and Guru Guna. It liquefies Kapha due to Teekshna guna, Sara guna, Vyavayi guna and Ushna veerya.

e. Action on Dhatu- Dries up the body elements, loosens the Sandhibandha and disunites Ojas from the dhatus, causes the bursting of tissues, new growth, abscess etc, produces unctuousness and induces Swedana.

f. Action on Mala– helps in easy elimination of faeces, urine and flatus

g. Systemic Action–
  - Digestive system- gives good taste to the food, overpower all the tastes (Sarva rasa pratyaneekabhuta), helps in proper Digestion, helps in moistening, Increases digestive fire, causes secretion (Chyavana), causes downward movement (Adasramsi), induces purgation by breaking hard stools.
  - Respiratory system- produces excision effect / expectoration (Chedana),
  - Musculoskeletal system- removes stiffness (Stambhavidhamana)
  - Urinary system- Diuretic (srishta mutra)
  - Other action- create space (Avakaashakara), useful in food processing (aharayogi), distinguishing (Vishleshana).

Example of Lavana rasa Pradhana Dravya -

Plant origin - Navasadara

Animal origin - Ushtra ksheera

Mineral origin - Saindhava, Sauvarchala, Vida, Romaka, Shisa, Kshara

Tikta Rasa

तिक्तो रसः स्वयमरोचिष्णुरप्यरोचकघ्नो विषघ्नः क्रिमिघ्नो मूर्च्छादाहकण्डूकुष्ठतृष्णाप्रशमनस्त्वङ्मांसयोः स्थिरीकरणो ज्वरघ्नो दीपनः पाचनः स्तन्यशोधनो लेखनः क्लेदमेदोवसामज्जलसीकापूयस्वेदमूत्रपुरीषपित्तश्लेष्मोपशोषणो रूक्षः शीतो लघुश्च| (C.S.Su.26/42 (5))

Even though Tiktarasa is not tasty itself, but it effectively cures anorexia. It serves as an antidote for poisons, destroys the worms, pacifiers fainting and burning sensations, relieves itching, and effective for skin diseases. It's also beneficial for quenching thirst, firming up skin and muscles, reducing fever, enhancing digestion fire, aids in proper digestion and purifying breast milk. Tikta rasa has scraping effect, it dries up moisture, fats, muscle fat, bone marrow, lymph tissue, pus, sweat, urine, and feces, as well as balancing Pitta and Kapha. It also has properties such as Ruksha, Sheeta and Laghu Guna.

तिक्तश्छेदनो रोचनो दीपनः शोधनःकण्डूकोठतृष्णामूर्च्छाज्वरप्रशमनः स्तन्यशोधनो विण्मूत्रक्लेदमेदोवसापूयोपशोषणश्चेति| (S.S.Su.42/10)

Tikta rasa disintegrates adherences, enhances taste, acts as an appetizer, cleanses, and effectively treats itching, rashes, thirst, fainting, and fever. It also purifies breast milk and dries up feces, urine, moisture, fats, muscle fat, and pus.

तिक्तः स्वयमरोचिष्णुररुचिविषकृमिमूर्च्छोत्क्लेदज्वरदाहतृट्कुष्ठकण्डूहरः क्लेदमेदोवसामज्जविण्मूत्रपित्तश्लेष्मोपशोषणो दीपनः पाचनो लेखनः स्तन्यकण्ठविशोधनो मेध्यो नातिरूक्षः शीतो लघुश्च| (A.S.Su.18/8)

Tiktarasa not pleasant in taste, but effectively treats anorexia. It detoxify the body and destroys the worms. It cures fainting, nausea, fever, burning sensations, thirst, and skin diseases. It also dries up moisture, fat, muscle fat, marrow, feces, urine, Pitta, and Kapha. It enhances digestive fire, aids in digestion, has scraping properties, cleanses milk and throat, enhances intelligence, and is having properties such as Ruksha, Sheeta and Laghu.

तिक्तः स्वयमरोचिष्णुररुचिं कृमितृड्विषम्|| कुष्ठमूर्च्छाज्वरोत्क्लेशदाहपित्तकफाजयेत्|
क्लेदमेदोवसामज्जशकृन्मूत्रोपशोषणः|| लघुर्मेध्यो हिमो रूक्षः स्तन्यकण्ठविशोधनः| (A.H.Su.10/ 14-16)

Tikta rasa is not pleasant in taste, but is effective in treating anorexia. It destroys the worms, pacify the thirst and detoxify the body. It is effective in skin diseases, fainting, fever, nausea, and burning sensations. It also alleviates imbalances of Pitta and Kapha and dries up moisture, fat, muscle fat, marrow, feces, and urine. It's easily digestible, enhances intelligence, has Sheeta and Ruksha guna and cleanses breast milk and the throat.

तिक्तः....शीतलाः....रूक्षाबद्धमलास्तथा....लघु...तिक्तकः| (A.H.Su.10/38)

Tiktarasa has Sheetaveerya, Ruksha and Laghu Guna and is to cause constipation.

शैत्यरौक्ष्यवैशद्यलाघवमार्दवैरेनंकोपयतितिक्तः। (Rasavaisheshika 3/71)

Tikta rasa is said to possess the propertiesnamely Sheeta, Ruksha, Vishada and Mridu while it has the tendency to vitiate Vata Dosha.

a. Commonly known name– Bitter

b. Panchamahabhuta Composition– Vayu + Aakasha

c. General action or Karma– act as antidote for poisons, relieves fever, cleansing the body

d. Action on Dosha– dries up Pitta and Shleshma due to Ruksha guna. Tikta rasa with properties such as Sheeta, Ruksha, Vishada and Mridu increases Vata.

e. Action on Dhatu– gives firmness to skin and muscles, has scrapping effect on dhatu, dries up moisture, fats, muscle fat, bone marrow, lymph tissue.

f. Action on Upadhatu– purifies breast milk

g. Action on Mala– dries up pus, sweat, urine and faeces, causes constipation.

h. Systemic Action –
  - Nervous system– cures fainting, increases intelligence
  - Digestive system– it cures anorexia (Arochakaghna), destroys the worms (Krimighna), good for relieving thirst, act as digestive fire enhancer, helps for proper digestion, increases the taste, cleanses the throat.

- Respiratory system- removes adherings of kapha in the respiratory tract (Chedana)
- Urinary system- antidiuretic (mutra upashoshana)
- Sense organ- good for curing burning sensation, good for relieving itching, good for relieving skin diseases, cures rashes
- Other action- Swayam aruchishnu (itself not tasty)

Example of Tikta rasa pradhana dravya–

Plant origin– Patola, Ushira, Chandana, Bhunimba, Nimba, Agaru, Haridra, Guduchi

Animal origin– None

Mineral origin– Kamsya, Aya

Katu Rasa

कटुको रसो वक्त्रं शोधयति, अग्निं दीपयति, भुक्तंशोषयति, घ्राणमास्रावयति, चक्षुर्विरेचयति, स्फुटीकरोतीन्द्रियाणि, अलसकश्वयथूपचयोदर्दाभिष्यन्दस्नेहस्वेदक्लेदमलानुपहन्ति, रोचयत्यशनं, कण्डूर्विनाशयति, व्रणानवसादयति, क्रिमीन्हिनस्ति, मांसं विलिखति, शोणितसङ्घातं भिनत्ति, बन्धांश्छिनत्ति, मार्गान्विवृणोति, श्लेष्माणंशमयति, लघुरुष्णो रूक्षश्च। (C.S.Su.26//42 (4))

Katu rasa cleanses the mouth, enhances digestive power, aids in food absorption, stimulates nasal secretion, induces lacrimation, promotes proper sense organ function, and effectively treats conditions like intestinal hypotony, edema, obesity, urticaria, and conjunctivitis. It also removes unctuousness, sweat, moisture, and waste products. It adds taste to food, alleviates itching, retards ulcer growth, eliminates germs, scrapes unwanted growth in muscle tissue, breaks blood clots, removes obstructions, clears channels, and alleviates Kapha. It possesses Laghu, Ushna and Ruksha Guna as properties.

कटुको दीपनः पाचनो रोचनः शोधनः स्थौल्यालस्यकफकृमिविषकुष्ठकण्डूप्रशमनः सन्धिबन्धविच्छेदनोऽवसादनः स्तन्यशुक्रमेदसामुपहन्ता चेति। (S.S.Su.42/9)

Katurasa acts as an appetizer, aids in digestion, enhances taste, and purifies the body. It effectively treats conditions such as obesity, lassitude, Kapha imbalances, worms, poison, skin diseases, and itching. It also loosens joints, may lead to depression, and reduces breast milk, semen, and fat.

कटुकोऽलसकश्वयथूदर्दस्थौल्याभिष्यन्दकृमिवक्त्ररोगविषकुष्ठकण्डूप्रसाधनो व्रणावसादनः स्नेहक्लेदशोषणो रोचनः पाचनोदीपनोलेखनःशोधनः शोषयत्यन्नं स्फुटयतीन्द्रियाणि भिनत्ति शोणितसङ्घातं छिनत्तिवन्धान्विवृणोतिस्रोतांसिक्षपयतिश्लेष्माणंलघुरूक्षतीक्ष्णोष्णश्च। (A.S.Su.18/9)

Katurasa effectively addresses ailments such as intestinal hypotony, swelling, skin lesions due to cold exposure, obesity, conjunctivitis, worm infestations, mouth diseases, poisoning, skin conditions, and itching. It hinders the healing process, dries up unctuousness and moisture, enhances taste perception, aids digestion, enhances digestive fire and has scraping effect. It also cleanses the body, dries up food, sharpens the senses, breaks blood clotting, removes constrictions, widens channels, pacifies Kapha, and is having Laghu, Ruksha, Teekshna and Ushna Guna.

कटुर्गलामयोदर्दकुष्ठालसकशोफजित् | व्रणावसादनः स्नेहमेदःक्लेदोपशोषणः||
दीपनःपाचनोरुच्यःशोधनोऽन्नस्यशोषणः | छिनत्तिवन्धान्स्रोतांसिविवृणोतिकफापहः|| (A.H.Su.10/ 17-18)

Katurasa effectively treats throat ailments, allergic rashes, skin diseases, intestinal hypotony, ulcers with swelling, and reduces excess unctuousness, fat, and moisture. It increases digestive fire, aids in digestion, improves taste, cleanses the body, dries up food moisture, breaks up hard masses, widens the channels, and mitigates Kapha imbalances.

रसाः कटु....वीर्येणोष्णा...कटुः....रूक्षाबद्धमलास्तथा...लघु..कटु| (A.H.Su.10/38)

Katurasa has Ushnaveerya,Ruksha and Laghu Guna. Due to its properties, the Rasa has the ability to produce constipation.

काटुक्यौष्ण्यरौक्ष्यलाघवैश्चपित्तंवर्धयतिकटुकः। (Rasavaisheshika 3/67)

Katurasa increases Pitta with its properties such as Katukya, Oushnya, Raukshya, Laghava.

रौक्ष्यलाघवकाटुक्यैरेववायुंकोपयतिकटुकः। (Rasavaisheshika 3/72)

Katurasa with properties such as roukshya, laghava and katukya increases Vayu.

a. Commonly known name– Pungent
b. Panchamahabhuta Composition– Vayu + Agni
c. General action or Karma– removes unctuousness, retards the growth of ulcers, removes the obstruction, clears the channels, purifies the body, act as antidote
d. Action on Dosha– alleviates Kapha due to properties such as Laghu, Ushna and Ruksha. Katu rasa increases Pitta with its properties such as Katukya, Oushnya, Raukshya, Laaghava. Even Katu rasa with properties such as Roukshya, Laghava and Katukya increases Vayu.
e. Action on Dhatu– cures the obesity, scrapes away unwanted growth in muscle tissue, decreases the fat, decreases semen, dries up unctuousness and moistness of the tissues, has scrapping action.

f. Action on Upadhatu- decreases breast milk

g. Action on Mala– causes constipation

h. Systemic Action–

- Nervous system- Aalasyaprashamana
- Digestive system - cleanses the mouth, promotes digestive power, helps in absorption of food, cures the diseases like intestinal hypotony, removes moisture, enhances the taste of food, destroys the worms, helps in digestion, cures the mouth diseases, dry up the food.
- Cardiovascular system - breaks the blood clots
- Respiratory system - cures diseases of throat, pacifies the kapha in the respiratory tract
- Musculoskeletal system - cures the oedema, loosens the joints
- Reproductive system - decreases semen
- Sense organ - causes secretion from nose, induces lacrimation, facilitate the proper functioning of sense organs, cures the urticaria, cures the conjunctivitis, alleviates itching sensation, cures skin diseases.

Example of Katu rasa pradhanadravya-

Plant origin- Hingu, Maricha, Vidanga, Panchakola

Animal origin- Pitta and mutra of chaaga

Mineral origin- Manashila

Kashaya Rasa

कषायो रसः संशमनः सङ्ग्राही सन्धानकरः पीडनो रोपणः शोषणः स्तम्भनः श्लेष्मरक्तपित्तप्रशमनः शरीरक्लेदस्योपयोक्ता रूक्षः शीतोऽलघुश्च। (C.S.Su.26/ 43)

Kashayarasa acts as a palliative, promotes tissue union, produces pressure (Peedana), aids healing, dries, alleviates Sleshma, Rakta, and Pitta, and absorbs body fluids. It possesses the qualities such as Ruksha, Sheeta, and Guru.

कषायः सङ्ग्राहको रोपणः स्तम्भनः शोधनो लेखनः शोषणः पीडनः क्लेदोपशोषणश्चेति। (S.S.Su.42/9)

Kashayarasa causes constipation, promotes wound healing, induces stiffness, cleanses the body, has scraping effect, dries up the body tissue, causes squeezing effect and absorbs the moisture.

कषायो वलासं सपित्तं सरक्तं निहन्त्याशु वध्नाति वर्चोतिरूक्षः। गुरुस्त्वक्सवर्णत्वकृत्क्लेद शोषी हिमः प्रीणनो रोपणो लेखनश्च। (A.S.Su.18/10)

Kashaya rasa pacifies Kapha, Pitta, and Rakta, inhibits bowel movements,

causes dryness, has Guru and HimaGuna, restores normal skin color, dries up the moistness, provides nourishment, aids healing of wound, and has scraping effect.

कषायः पित्तकफहा गुरुरस्रविशोधनः। पीडनो रोपणः शीतः क्लेदमेदोविशोषणः॥ आमसंस्तम्भनोग्राहि रूक्षोऽतित्वक्प्रसादनः। (A.H.Su.10/ 20-21)

Kashaya rasa mitigates Pitta and Kapha, has Guru, Sheeta and Rukshaguna, cleanses the blood, causes squeezing, promotes wound healing, dries up moisture and fat, hinders digestion of undigested food, induces constipation and good for the skin.

कषायो...शीतलाः...कषायश्चरूक्षाबद्धमलास्तथा...कषाय...परमं गुरुः (A.Hr.Su.10/38)

Kashaya rasa has a cold potency, is Ruksha and Guru. It causes constipation.

शैत्यरौक्ष्यवैशद्यविष्टम्भैर्वायुंवर्धयतिकषायः। (Rasavaisheshika 3/70)

Kashayarasais said to possess the properties namely Sheeta, Ruksha and Vishadha Guna due to which it can cause vitiation of Vata Dosha and constipation (Vishtambha).

a. Commonlyknownname– Astringent

b. Panchamahabhuta Composition– Vayu + Prithvi

c. General action or Karma– act as palliative (Shamshamana), has squeezing action, cleansing / purifying the body.

d. Action on Dosha– alleviates Sleshma due to Rukshaguna and alleviates Pitta due to Sheeta and Guru Guna. Kashayarasa increases Vatadoshadue to properties such as Sheeta, Ruksha, Vishadha and action like Vishtambha.

e. Action on Dhatu– promotes the union of tissues,promotes healing, causes drying the tissues, absorbs the body fluid, scrapping effect, dries up moisture from the tissues, alleviates Rakta, nourishing all the body part, dries up body fat

f. Action on Mala– causes constipation

g. Systemic Action –

- Digestive system- hinders the digestion of undigested food
- Cardiovascular system- cleanses the blood
- Musculoskeletal system- causes stiffness
- Sense organ- imparts normal colour to skin, conducive to the skin.

Example of Kashayarasa Pradhana Dravya-

Plant origin- Haritaki, Vibhitaki, Shirisha, Khadhira, Kadambha, Udumbara, Baalakapittha

Animal origin- Madhu

Mineral origin- Mukta, Pravala, Anjana, Gairika

4.6. Atiyogalakshana of Rasa

Madhura Rasa

स एवं गुणोऽप्येक एवात्यर्थमुपयुज्यमानः स्थौल्यं मार्दवमालस्यमतिस्वप्नं गौरवमनन्नाभिलाषमग्नेर्दौर्बल्यमास्यकण्ठयोर्मांसाभिवृद्धिं श्वासकासप्रतिश्यायालसकशीतज्वरानाहास्यमाधुर्यवमथुसञ्ज्ञास्वरप्रणाशगलगण्डगण्डमालाश्लीपदगलशोफबस्तिधमनीगलोपलेपाक्ष्यामयाभिष्यन्दानित्येवम्प्रभृतीन् कफजान्विकारानुपजनयति । (C.S.Su.26/42(1))

Excessive intake of Madhurarasa Dravyas leads to following complications:

Obesity, Softness of the body parts, lazyness, Excessive sleep, results in feeling of heaviness, lack of desire towards food, decreased digestive power, excessive muscular growth around mouth and throat, causes dyspnoea, cough and running nose. It also results in intestinal hypotony (Alasaka), fever with rigors (Shitajwara), distension of abdomen, sweetness in the mouth, vomiting, loss of consciousness, loss of voice, diseases related to thyroid (Galaganda and Gandamala), Elephantiasis (Shlipada), pharyngitis (Galashopha), coating in the bladder, vessels and throat, eye diseases, conjunctivitis (Abhishyandha), produces different disorders originating from Kaphadosha.

स एवं गुणोऽप्येक एवात्यर्थमासेव्यमानः कासश्वासालसकवमथुवदनमाधुर्यस्वरोपघातकृमिगलगण्डानापादयति तथाऽर्बुदश्लीपदबस्तिगुदोपलेपाभिष्यन्दप्रभृतींञ्जनयति । (S.S.Su.42/10 -1)

Excessive intake of Madhurarasa leads to cough, dyspnoea, Intestinal hypotony (Alasaka), vomiting, sweetness in the mouth, loss of voice, worm infestation, diseases related to thyroid, tumour (Arbudha), Elephantiasis, coating in the bladder and anus, conjunctivitis.

एवङ्गुणोऽपि स सदात्युपयुज्यमानः स्थौल्याग्निसादगुरुतालसकातिनिद्राः ।
श्वासप्रमेहगलरोगविसञ्ज्ञतास्यमाधुर्यलोचनगलार्बुदगण्डमालाः ।
छर्द्युर्दमूर्द्धरुक्कासपीनसक्रिमीन् । श्लीपदज्वरोदरष्ठीवनानि चावहेत् ॥ (A.S.Su.18/5)

Excessive consumption of Madhurarasa lead to obesity, decreased digestive power, heaviness of the body, intestinal hypotony leading to stasis of food for long duration in alimentary tract, excessive sleep, dyspnoea, diabetes, throat

disorders, loss of consciousness, sweetness in the mouth, tumours in throat region, diseases of thyroid, vomiting, rashes on skin, pain in head region, cough, running nose, worm infestation, elephantiasis, fever, enlargement of abdomen (Udara), profuse expectoration (Shteevana).

कुरुतेऽप्युपयोगेन स मेदःश्लेष्मजान्गदान् । स्थौल्याग्निसादसन्न्यासमेहगण्डार्बुदादिकान् ॥ (A.H.Su.10/ 9)

Excessive intake of Madhurarasa leads to diseases of Medadhatu and Sleshma Dosha like obesity, decreased digestive power, Unconsciousness, Diabetes, diseases of thyroid and malignant tumour.

Amla Rasa

स एवं गुणोऽप्येक एवात्यर्थमुपयुज्यमानो दन्तान् हर्षयति, तर्षयति, सम्मीलयत्यक्षिणी, संवेजयति लोमानि, कफं विलापयति, पित्तमभिवर्धयति, रक्तं दूषयति, मांसं विदहति, कायं शिथिलीकरोति, क्षीणक्षतकृशदुर्बलानां श्वयथुमापादयति, अपि च क्षताभिहतदष्टदग्धभग्नशूनप्रच्युतावमूत्रितपरिसर्पितमर्दितच्छिन्नभिन्नविश्लिष्टोद्विद्धोत्पिष्टादीनि पाचयत्याग्नेयस्वभावात्, परिदहति कण्ठमुरो हृदयं च । (C.S.Su.26/42(2))

Excessive intake of Amlarasa Dravyas results in following complications:

Produces morbid sensitivity of the teeth, causes thirst, closure of eyes (Sammilayathiakshini), horripilation (Sanvejayathilomani), liquefaction of Kapha, increases Pitta, vitiation of blood, breakdown of muscle tissue (Mamsamvidahathi), causes looseness of the body, causes swellings in the person who are emaciated, injured or weakened, Due to hot potency induces suppuration (pachayathiagneyaswabhavat) in the conditions like ulcer, trauma, bites, burn, fracture, swelling, dislocation, spots on the body due to urination of poisonous animals, contact with poisonous animals, bruise, excision, incision, separation, perforation and crushing, causes burning sensation in the throat, chest and cardiac region.

स एवं गुणोऽप्येक एवात्यर्थमुपसेव्यमानो दन्तहर्षनयनसम्मीलनरोमसंवेजनकफविलयनशरीरशैथिल्यान्यापादयति, तथा क्षताभिहतदग्धदष्टभग्नरुग्णशूनप्रच्युतावमूत्रितविसर्पितच्छिन्नभिन्नविद्धोत्पिष्टादीनि पाचयत्याग्नेयस्वभावात् परिदहति कण्ठमुरो हृदयं चेति । (Su.Su.42/ 10 -2)

Excessive consumption of Amlarasa can result in tooth sensitivity, eyelid drooping, skin horripilation (Romasamvejana), Kapha liquefaction and bodily laxity. Its inherently fiery nature (Agneya Swabhava) promotes suppuration in conditions such as ulcers, trauma, burns, animal bites, fractures, swelling, dislocations, skin spots caused by contact with poisonous animals, excision sites, incision sites, punctured and crushed areas. Moreover, it can induce a burning sensation in the throat, chest, and cardiac regions.

जनयति शिथिलत्वं सेवितः सोऽतिदेहे कफविलयनकण्डूपाण्डुतारक्तदृग्विघातान् ।
क्षतविहितविसर्पं रक्तपित्तं पिपासां श्वयथुमपि कृशानां तैजसत्वात् भ्रमञ्च ॥ (A.S.Su.18/6)

Excessive intake of Amla rasa can lead to bodily laxity, liquification of Kapha, itching, anaemia, vision impairments, the spreading of ulcers resulting in herpes, bleeding disorders, intense thirst, swelling (even in individuals who are emaciated) and dizziness due to its hot potency.

सोऽत्यभ्यस्तस्तनोः कुर्याच्छैथिल्यं तिमिरं भ्रमम् ॥ कण्डुपाण्डुत्ववीसर्पशोफविस्फोटतृड्ज्वरान् ।

(A.H.Su.10/ 11-12)

Excessive consumption of Amlarasa may lead to laxity in the body, visual disturbance, dizziness, itching, anaemia, herpes, swellings, blisters, thirst and fever.

Lavana Rasa

स एवं गुणोऽप्येक एवात्यर्थमुपयुज्यमानः पित्तं कोपयति, रक्तं वर्धयति, तर्षयति, मूर्च्छयति, तापयति, दारयति, कुष्णाति मांसानि, प्रगालयति कुष्ठानि, विषं वर्धयति, शोफान् स्फोटयति, दन्तांश्च्यावयति, पुंस्त्वमुपहन्ति, इन्द्रियाण्युपरुणद्धि, वलिपलितखालित्यमापादयति, अपि च लोहितपित्ताम्लपित्तविसर्पवातरक्त विचर्चिकेन्द्रलुप्तप्रभृतीन्विकारानुपजनयति । (C.S.Su.26/42(3))

Excessive intake of Lavanarasa Dravyas leads to vitiation of Pitta, aggravation of the Rakta dhatu, leading to symptoms such as burning sensations, fainting, increased body temperature, erosion, muscle tissue vitiation, slough formation from skin lesions, increases the susceptibility to the effects of poisonous substances, rupture of inflamed swellings, teeth dislodgment, impotency, interference with the normal functioning of sense organs, premature wrinkling, greying of hair, and baldness. It can also contribute to bleeding disorders, hyperacidity, herpes, gout, eczema, alopecia, and various related disorders.

एवं गुणोऽप्येक एवात्यर्थमासेव्यमानो गात्रकण्डूकोठशोफवैवर्ण्यपुंस्त्वोपघातेन्द्रियोपतापमुखाक्षिपाक रक्तपित्तवातशोणिताम्लीकाप्रभृतीनापादयति । (S.S.Su.42/10 - 3)

Overconsumption of Lavanarasa can result in bodily itching, skin rashes, swelling, skin discoloration, impotency, impaired sensory functions, ulceration in the mouth and eyes, bleeding disorders, gout and sour belching.

खलतिपलिततृष्णातापमूर्च्छाविसर्पश्वयथुकिटिभकोठाक्षेपरोधास्रपित्तम् । क्षतविषमदवृद्धिं वातरक्तं करोति क्षपयति बलमोजः सोऽति वा सेवनेन ॥ (A.S.Su.18/7)

Excessive consumption of Lavana rasa can result in hair loss leading to baldness, premature greying of hair, increased thirst, burning sensations, fainting, herpes, swelling, Kitibha (a type of skin disease), skin rashes, convulsions, obstructions, bleeding disorders. It increases susceptibility to wounds, the effects of poison and intoxication. It results in gout, decreased strength and diminished Ojas.

सोऽतियुक्तोऽस्रपवनं ख़लतिं पलितं वलिम् ॥ तृट्कुष्ठविषवीसर्पान् जनयेत्क्षपयेद्बलम् । (A.H.Su.10/ 13-14)

Excessive Lavana rasa intake aggravates Rakta and Vata dosha, causes hair loss leading to baldness, premature greying, wrinkles of the skin, thirst, skin lesions, herpes, and diminishes overall body strength.

Tikta Rasa

स एवं गुणोऽप्येक एवात्यर्थमुपयुज्यमानो रौक्ष्यात्खरविषदस्वभावाच्च रसरुधिरमांसमेदोस्थिमज्जशुक्राण्युच्छोषयति, स्रोतसांखरत्वमुपपादयति, बलमादत्ते, कर्शयति, ग्लपयति, मोहयति, भ्रमयति, वदनमुपशोषयति, अपरांश्च वातविकारानुपजनयति । (C.S.Su.26/42(5))

Excessive consumption of Tikta rasa Dravyas can lead to complications due to their inherent properties, such as Ruksha, Khara and Vishada. These effects include drying up all the dhatu, produces roughness in the channels, loss of strength, emaciation, fatigue, confusion, giddiness, dry mouth and the manifestation of Vata Dosha-related diseases.

स एवं गुणोऽप्येक एवात्यर्थमुपसेव्यमानो गात्रमन्यास्तम्भाक्षेपकार्दितशिरःशूलभ्रमतोदभेदच्छेदास्यवैरस्यान्यापादयति । (S.S.Su.42/10 -5)

Excessive consumption of Tiktarasa can result in stiffness of body and neck, convulsions, facial palsy, headaches, giddiness. It also causes pricking, breaking and cutting type of pain, results in abnormal taste in the mouth.

धातुबलक्षयमूर्च्छाग्लानिभ्रमवातरोगपरुषत्वम् । खरविशदरौक्ष्यभावैः सोऽतिसमासेवितः कुर्यात् ॥

(A.S.Su.18/8)

Overconsumption of Tikta rasa can lead to reduced dhatu strength, fainting, weakness, giddiness, and disorders associated with Vata vitiation due to the qualities such as Parushatva, Khara, Vishada and Raukshyaguna.

धातुक्षयानिलव्याधीनतियोगात्करोति सः ॥ (A.H.Su.10/ 16)

Excessive consumption of Tiktarasa leads to Dhatukshaya (depletion of tissues) and diseases of Vata origin.

Katu Rasa

स एवं गुणोऽप्येक एवात्यर्थमुपयुज्यमानो विपाकप्रभावात् पुंस्त्वमुपहन्ति, रसवीर्यप्रभावान्मोहयन्ति, ग्लापयति, सादयति, कर्शयति, मूर्च्छयति, नमयति, तमयति, भ्रमयति, कण्ठं परिदहति, शरीरतापमुपजनयति, बलं क्षिणोति, तृष्णां जनयति; अपि च वाय्वग्निगुणबाहुल्याद्भ्रमदवथुकम्पतोदभेदैश्चरणभुजपार्श्वपृष्ठप्रभृतिषुमारुतजान् विकारानुपजनयति । (C.S.Su.26/42(4))

Excessive consumption of Katu rasa may lead to impotence due to its influence on Vipaka and cause unconsciousness due to its impact on Rasa and Veerya. Additionally, it can result in fatigue, weariness, emaciation, fainting, body

bending, choking, giddiness, throat burning, increased body temperature, reduced strength, and heightened thirst. It may also induce giddiness, burning sensations, tremors, pricking pain, and stabbing pain in the legs, arms, flanks, and back, primarily due to the dominance of Vayu and Agni, and may contribute to other Vataja disorders.

स एवङ्गणोऽप्येकएवात्यर्थमुपसेव्यमानोभ्रममदगलताल्वोष्ठशोषदाहसन्तापबलविघातकम्पतोदभेदकृत्कर चरणपार्श्वपृष्ठप्रभृतिषु च वातशूलानापादयति | (S.S.Su.42/10 -4)

Excessive consumption of Katu rasa can result in giddiness, intoxication, dryness in the throat, palate, and lips, a burning sensation, elevated body temperature, loss of strength, tremors, causes pricking pain, sharp pain and VatajaShula in the hands, legs, flanks, and back.

कुरुतेऽतिनिषेवितःसतृष्णांमदमूर्च्छावमिमोहदेहसादान् |
बलशुक्रगलोपशोषकम्पभ्रमतापग्लपनातिकर्शनानि ||
करचरणपार्श्वपृष्ठप्रभृतिष्वनिलस्यकोपमतितीव्रम् | सङ्कोचतोदभेदैःवाय्वग्निगुणाधिकत्वेन ||(A.S.Su.18/9)

Over indulgence in Katurasa can cause thirst, intoxication, fainting, vomiting, delusion, bodily weakness, reduced strength, decreased semen, throat dryness, tremors, giddiness, a feeling of elevated body temperature, tiredness, and severe emaciation. Due to the prevalence of Vayu and Agni, excessive intake of Katurasa can lead to intense burning sensations in the hands, feet, flanks, and back. It may also result in constricting, twisting, or pricking types of pain in these regions.

कुरुतेसोऽतियोगेनतृष्णांशुक्रवलक्षयम्| मूर्च्छामाकुञ्चनंकम्पंकटिपृष्ठादिषुव्यथाम् || (A.H.Su.10/ 19)

Excessive consumption of Katurasa leads to thirst, depletion of semen and strength, fainting, contractures (Aakunchana), tremors, and pain in the waist, back, and other areas of the body.

Kashaya Rasa

स एवङ्णोऽप्येकएवात्यर्थमुपयुज्यमानआस्यंशोषयति, हृदयंपीडयति, उदरमाध्मापयति, वाचंनिगृह्णाति, स्रोतांस्यवबध्नाति, श्यावत्वमापादयति, पुंस्त्वमुपहन्ति, विष्टभ्यजरांगच्छति, वातमूत्रपुरीषरेतांस्यवगृह्णाति, कर्शयति, ग्लपयति, तर्पयति, स्तम्भयति, खरविशदरूक्षत्वात्पक्षवधग्रहापतानकार्दितप्रभृतींश्ववातविकारानुपज नयति | (C.S.Su.26/43)

Excessive intake of Kashayarasa Dravyas leads to dryness in the mouth, discomfort in the heart, distension in the abdomen, disturbance in the speech, obstructs the channels, causes blackish discolouration, causes impotency, delayed digestion, obstructs the flow of Vata, Mutra, Purisha and Retas. It also causes

emaciation, fatigue, a burning sensation and produces stiffness. Due to the presence of qualities like Khara Vishada and Ruksha, it causes Vatavyadhi like hemiplegia (pakshavadha), spasm, convulsions (Apatanaka), facial paralysis etc.

स एवं गुणोऽप्येक एवात्यर्थमुपसेव्यमानो हृत्पीडास्यशोषोदराध्मानवाक्यग्रहमन्यास्तम्भ- गात्रस्फुरणचुमुचुमायनाकुञ्चनाक्षेपणप्रभृतीञ्जनयति | (Su.Su.42/10)

Excessive intake of Kashaya rasa results in pain in cardiac region, dryness of mouth, distension of abdomen, impairment of speech, neck stiffness, throbbing pain in the body (Gaatrasphurana), tingling sensation (chumuchumaayana), contraction (Aakunchana) and convulsions (Aakshepana).

अत्यभ्यासात्मोऽपि शुक्रोपरोधं तृष्णाध्मानस्तम्भविष्टम्भकार्श्यम् |
स्रोतोबन्धं वातविण्मूत्रसङ्गं पक्षाघाताक्षेपकादींश्चकुर्यात् || (A.Sa.Su.18/10)

Excessive intake of Kashaya rasa results in obstruction of the shukra dhatu, thirst, distention of abdomen, stiffness, stasis of food without digestion (Vishtambha), emaciation, obstruction of Srotas, obstruction to the flow of Vata, vit and mutra, as well as the development of conditions like hemiplegia and convulsions.

करोति शीलितः सोऽति विष्टम्भाध्मानहृद्रुजः || तृट्कार्श्यपौरुषभ्रंशस्रोतोरोधमलग्रहान् | (A.H.Su.10/ 21-22)

Excessive intake of Kashaya rasa causes stasis of food without digestion, distension of abdomen, pain in the cardiac region, thirst, emaciation, produces impotency (Paurushabhramsha), obstruction of channels and constipation.

4.7. Clinical application and Research updates of Shadrasa

- In the chapter of Apamargatanduliyaadhyaya of Charaka Samhita, Acharya chakrapani has explained two types of dravya namely Oushadha dravya and Ahara dravya.

वीर्यप्रधानमौषधद्रव्यं, तथा रसप्रधानमाहारद्रव्यं च| (Chakrapani Commentary on C.S.Su.2/17)

यद् द्रव्यमुपयुक्तं देहे रसधातु तद् द्वारा रक्तादि धातुश्च प्राधान्येन पुष्णाति, न त्वौषधद्रव्यवत् प्रधानतया देहे शीतोष्णादीन् वीर्यसंज्ञकान् गुणाञ्जनयति तद्रसंप्रधानं, तदाहारद्रव्यम्, यवगोधूमादि | (Chakrapani Commentary on C.S.Su.2/17)

Wherein he has opined that aharadravya have rasa dominance and thus, they nourishes the dhatu and gives strength. Ex: Godhuma and Shali.

- The literature given importance to order of consumption of rasa while consuming food.

पूर्वं मधुरमश्नीयान्मध्येऽम्ललवणौरसौ ||
पश्चाच्छेषान् रसान्वैद्यो भोजनेष्ववचारयेत् | (S.S.Su.46/460)

In the beginning of food consumption one has to take Madhurarasa. In the middle of food has to take Amla and Lavana Rasa Pradhana Dravya. Rest of the rasa at the end of the food consumption.

बुभुक्षिते पुरुषेवातपित्तप्रशमनायप्रथमंमधुरोरसः पक्वाशयगतंवायुंजयति, अम्ललवणौमध्यभोजनस्थौ पित्ताशयेऽग्निदीप्तिंकुरुतः, अन्तेकफजयायकट्वादयः | (Dahlana Commentary on S.S.Su.46/460)

Acharya Dalhana has quoted the reason behind the order of consumption of the Rasa. Madhura rasa is consumed in the beginning by the hungry person to do Vata and Pitta Shamana. Amla and Lavana Rasa in the middle of the food to do Agnideepthi in pittashaya. Katu, Tikta and Kashaya Rasa at the end to overcome Kapha aggravation.

- In Rasavaisheshika sutra it has been mentioned that -

➢ At times, the selection of a substitute for medicinal plants is influenced by assessing the resemblance of tastes. Example : Madhura SkandhaDravya are substitute for VidaryadiGana.

➢ When the taste of a substance is deteriorated or altered, it becomes evident that the substance itself may have deteriorated. The Rasavaisheshika enumerates eleven factors by which the taste of a substance can be altered, including factors such as location (Sthana), vessel (Patra), combination (Samyoga), processing (Paaka), exposure to sun (Aatapa), trituration (Bhavana), place (Desha), time (Kaala), transformation (Parinama), infestation (Upasarga), and special acts (Vikriya). For example, if sugarcane becomes infected, it may exhibit a sour or bitter taste.

- In Charakasamhitha in Agrya Prakarana, importance of rasa is highlighted as mentioned below :

  ✓ सर्वरसाभ्यासो वलकराणाम् (c.s.su..25 / 40) - Consumption of food predominant of all rasa enhances the strength of the individual.

  ✓ एकरसाभ्यासो दौर्बल्यकराणां (c.s.su.25 / 40) - Consumption of food predominant of only one rasa reduces the strength of the individual.

Rasa helps in three different dimensions in the clinical practices as follows:

➢ Acts as the etiological factors for the manifestation of diseases (hetu) - An excessive intake or deficiency of specific rasas can act as causative factors for the development of diseases by disrupting the equilibrium of the Tridosha.

➢ Helps in the diagnostic features of various diseases (Linga) - They assist in examining patients and identifying diseases based on symptoms, such as aversion towards food (Aasyavairasya) and improper perception of taste (Arasajnata), which are observed through the expression of Rasa. Apart from these, even Rasa related Arista Lakshana are explained by Acharya Charaka in Indriya Sthana. Additionally, the Charaka Samhita, particularly in the Indriya Sthana, provide insights into Arista Lakshana related to rasas.

➢ Plays a crucial role in therapeutic applications (Aushadha) - Ayurvedic literature often describes the pharmacological effects of drugs based on the rasas they contain. This information guides the treatment process by highlighting how specific rasas in medicinal substances interact with doshas to alleviate diseases.

Rasa is therefore of paramount importance in recognizing the involvement of vata, pitta, and kapha (the fundamental causes of diseases) and in devising tailored treatment approaches accordingly.

Interpret Clinical application of each Rasa.

Madhura Rasa-

➢ पूर्वं मधुरमश्नीयात् |s.s.su.46/460 - while consumption of food, the literatures has empahsized to consume rasa in specific order, where Madhura rasa is mentioned in the beginning.

➢ लवणाम्लकटूष्णानिविदाहीन्यतियानितु । तद्दोषंहर्तुमाहारंमधुरेणसमापयेत्॥ (b.n.p.5/130) - if Lavana, Amla, Katu, Ushna and Vidahiahara are consumed in excess, then, for Aharajanya Doshaharana one has to consume Madhurarasa Pradhana Ahara.

➢ Madhura rasa as cause - For the manifestation of diseases like Sthaulya, Prameha Madhura rasa is one of the causative factor. [मधुरनित्या प्रमेहिणं मूकमतिस्थूलं वा,c.s.sa.8/21 - daily consumption of madhura rasa dravya by pregnant women, may lead to baby with prameha, dumb, obesity in child.]

➢ Madhurarasa as Linga - Madhurasyata is one of the clinical features of Kaphaja panduroga. (c.s.ci.16/25)

➢ Madhura rasa as medicine - in Garbhini Paricharya initial three month, milk processed with Madhuraushadha are suggested c.s.sha.8

Amla Rasa-

➢ अम्लं हृद्यानां c.s.su.25 / 40 - Amlarasa is good for heart.

➢ Amla rasa as hetu (cause) - Various references denote use of Amlarasa will result in diseases like Raktapitta c.s.ci.4/6, Kusta c.s.ci.7/7, Pittaja Jwara c.s.ni.1/22, अम्लनित्या रक्तपित्तिनं त्वगक्षिरोगिणं वा, (c.s.sa.8/21) - daily consumption of Amlarasa Dravya by pregnant women, may lead to bleeding disorder, skin disorder, eye disorder.

➢ Amlarasa as Linga - Amlodgara is the clinical features of Amla Pitta.

➢ Amlarasa as medicine - used in the treatment of Hridroga, Ajirna, Agnimandhya

Lavana Rasa -

- लवणमन्नद्रव्यरुचिकराणाम् c.s.su.25 / 40 - Lavanarasa enhances the taste of food.
- भोजनाग्रेसदापथ्यंल वणार्द्रकभक्षणम्।
  अग्निसंदीपनं रुच्यं जिह्वाकण्ठविशोधनम्॥ b.n.p.5/130 - before food if Lavana along with adraka is consumed, it will enhances digestive fire, improve taste, clears the tongue and throat.
- Lavana is mentioned under those substances that are not to be taken in excess as it may lead to balding (Khalitya), immature greying (Palitya) and loss of elasticity in skin (Vali) c.s.vi.1/15.
- Lavana rasa as cause - Rakta Pitta c.s.ci.4/6, Kusta c.s.ci.7/7, Pittaja Jwara c.s.ni.1/22, लवणनित्या शीघ्रवलीपलितं खालित्य रोगिणं वा, c.s.sa.8/21 - daily consumption of Lavanarasa Dravya by pregnant women, may lead to baby with premature greying of hair, wrinkling of the skin.
- Lavana rasa as Linga - Lavanasyatha is the symptom is disease caused due to vitiation of Rakta c.s.su.24/14
- Lavana rasa as medicine - Lavana used in the formulation of Vamana and Basti dravya as an ingredient. It is also used in the treatment of Basti Vyapat.

Katu Rasa -

- Stick used for Dantadhavana can be obtained from the plants having Katu-rasa. a.h.su.2/2
- Katu rasa as cause - Rakta Pitta c.s.ci.4/6, Pittaja Jwara c.s.ni.1/22, कटुकनित्या दुर्बलमल्प शुक्रमनपत्यं वा, c.s.sa.8/21 - daily consumption of Katurasa Dravya by pregnant women, may lead to baby with less strength, reduced amount sperm or loss of child.
- Katurasa as Linga - Katukasya is the clinical features of Pittaja Jwara c.s.ni.1/24, Pittaja Udara c.s.ci.13/28 and Pittaja Visha c.s.ci.23/168
- Katurasa as Medicine - in Kaphaja Vyadhi

Tikta Rasa -

- Stick used for dantadhavana can be obtained from the plants having Tikta rasa. a.h.su.2/2
- Tikta rasa as cause - तिक्तनित्या शोषिणमबलमनुपचितं वा, c.s.sa.8/21 - daily consumption of Tiktarasa Dravya by pregnant women, may lead to baby with dryness of the body, decreased strength, not well nourished.
- Tikta rasa as Linga - Tiktaasyata in Pittaja Vyadhi c.s.su.20/14
- Tikta rasa as aushadha - Chikitsa, usage of Tikta rasa is mentioned in Navajwara. c.s.ci.3/142

Kashaya Rasa -

- Stick used for Dantadhavana can be obtained from the plants having Kashaya rasa. a.h.su.2/2
- Kashayarasa as Hetu - Vatajaprameha c.s.ni.4/37 कषायनित्या श्यावमानाहिनमुदावर्तिनं वा c.s.sa.8/21- daily consumption of Kashayarasa Dravya by pregnant women, may lead to baby with Shyavavarna, Anaha and Udavarta.
- Kashayarasa as Linga - Kashayasyata as symptom in Vatajajwara a.h.ni.2/15
- Kashayarasa as Medicine - Kashayarasa is used in the treatment of diseases caused by Pittadosha c.s.vi.6/17, used in treatment of Raktapitta c.s.ni. 2/ 11

Discuss Research updates of Shadrasa

1. Dr.Wischy of Germany, as mentioned by Dr. Dwarkanath, was the pioneer in using the term 'Taste - threshold', which refers to the minimum quantity of a substance needed to stimulate the taste buds. Subsequently, Dr. D. Krishna Moorthy developed a Dilution method for determining taste thresholds.
2. Dr S.C. Dhyani had conducted an examination of how the taste of drugs collected from different regions of the country varies. This ecological impact was evaluated by considering taste threshold as a parameter.
3. According to Shri Rajesh Vihari Mathur, it is the distinctive arrangements and precise motions of electrons and protons within the substance that give rise to the distinctive color and taste attributes.
4. Dr. Hiremath conducted research to assess how the taste threshold of drugs is influenced by storage conditions.
5. An experimental study conducted by Dr. Bipin Sawant et al. aimed to determine the Rasapanchaka of *Zornia gibbosa* Span, locally known as Nellujo-llusoppu / Haradahacchaga, traditionally used to treat fractures. The study focused on analyzing the taste of various parts of the plant, including fresh leaves and roots, as well as formulations like Choorna, Kalka, and Kwatha made from the entire plant. The results showed that *Zornia gibbosa* Span (Samyojaki) possesses predominantly Kashaya rasa with Tikta and Mad-hura as anurasa.
6. Dr. Sushama B. Bhuvad and Dr Nishteswar Karra conducted a study to validate the Rasas mentioned in classical texts using well-known, classical drugs from the Madhuraskandha. This research, performed on healthy vol-unteers and employing a structured proforma, found that there was consis-tency with the Rasas described in the lexicons, with the exception of Atibala, Eranda, Gokshura, and Jivanti samples. These samples exhibited the pres-

ence of Tikta and Lavana Rasas, respectively. The study's conclusion suggested that these drugs may operate through Madhura vipaka or Madhura prabhava, as mentioned by Acharya Charaka.

7. Dr. Sharad D. Chougule and Dr Nilesh Vasant Chougule conducted a study on the taste perception of Madhura Rasa in individuals with Kaphadhikya Prakriti, focusing on Bodhaka Kapha secretion time and sensitivity. The study aimed to determine the time required for BodhakaKapha secretion and to confirm the location of Madhura Rasa according to modern texts. The findings indicated that the average Bodhaka Kapha secretion time was approximately 39.75 seconds. The average threshold for Madhura Rasa was 0.054M and 0.1%, and the perception of Madhura Rasa was primarily at the tip of the tongue. Additionally, it was observed that Bodhaka Kapha secretion time was shorter in Kaphapitta Prakriti compared to Kaphavata Prakriti.
8. Rama Jayasundar and Somenath Ghatak conducted a study involving the spectroscopic and E-tongue evaluation of medicinal plants. Their goal was to utilize structural and functional information obtained from analytical techniques to classify medicinal plants in Ayurveda based on their Rasa. The study found that, in terms of taste and phytochemical profiles, all samples were distinct but shared similarities within each group. Notably, the E-tongue sensor response indicated similarities within the sweet and pungent categories, while the NMR spectra in the aromatic region revealed close similarities among plants in the sweet category.
9. A study by Dr. Akshay Kumar and colleagues analyzed the effects of varying concentrations of Amla rasa on mamsa dhatu through experimental research on Wistar albino rats. The results showed an increase in total protein, serum albumin, and serum creatinine levels, as well as a decrease in serum globulin, serum urea levels, and body weight. The study concluded that Amla rasa has a catabolic effect on mamsa dhatu and anabolic action on serum protein, particularly at the liver level, which results in a loss of muscle tissue.
10. Dr.Mrudula Vinayak Joshi et.al., conducted an observational study to investigate whether the consumption of common salt (Lavana rasa) in excess could be a contributing factor to the development of Amlapitta. The findings of the study revealed a higher prevalence of Amlapitta among individuals in the 20 -29 age group who had a preference for salty, spicy and pungent tastes.

4.8. Anurasa

Define Anurasa

अव्यक्तोऽनुरसः किञ्चिदन्ते व्यक्तोऽपि चेष्यते ||(A.H.Su.9/4)

Taste of a substance which do not clearly manifest or which are perceived at the end are known as Anurasa (secondary tastes).

यश्चाव्यक्तो-अस्फुटप्रतिभासो रसनेन्द्रियेणोपलभ्यते, सोऽनुरसः| हीनार्थोऽत्रानुशब्दः, अल्पो रस इत्यर्थः| ... अन्ते इत्यनेनैतद्बोधयति,-अन्ते-अवसाने, न त्वादावापातमात्रे न च मध्ये|... अनुशब्दस्यात्र पश्चादर्थत्वात् पश्चात् स्फुटोऽपि किञ्चिद्य उपलभ्यते सोऽप्यनुरस इत्यर्थः |(Arundatta Commentary on A.H.Su.9/4)

That which is subtle, not clearly apparent, yet perceived by the Rasanendriya, is Anurasa. In this context, the word 'Anu' refers to something that is inferior, low or insignificant, while the words 'Alpo Rasa' refers to the intensity of perception with respect to taste. The term 'ante' here indicates that the perception is obtained at the end or after the process of chewing the substance for a considerable amount of time and is about to be swallowed inside. It is not perceived immediately or even during the process of chewing too. The word 'anu' also refers to the one that is seen or done later. As the taste is obtained at the time of swallowing the substance which is much later to the act of ingestion, it is given the name Anurasa.

तत्र-द्रव्ये, कश्चिद्धर्मः सद्योव्यक्तः कश्चिदव्यक्तः कश्चिदीषद्व्यक्तः कश्चिदन्ते व्यक्तः| तेष्वाद्यो रसाख्यः, इतरे त्रयोऽनुरसाख्याः |(Hemadri Commentary on A.H.Su.9/4)

When the substances are taken internally, some attributes are immediately manifested, some are unmanifested, some are manifest in small amount and some are manifest at the end. Among these, the first kind is Rasa, while other three kinds are Anurasa.

अनुरसस्तु रसेनाभिभूतत्वादव्यक्तो व्यक्तो वा किञ्चिदन्ते ||(A.S.Su.17/3)

That which remains unnoticeable due to being overshadowed by the dominant rasa or only becomes faintly perceptible towards the end is referred to as 'Anurasa'.

यश्च रसो यस्मिन् द्रव्येऽनुरसत्वेनोक्तः स प्रधानरसेनाभिभूतत्वादव्यक्त एव तिष्ठति| प्रधानरसविजातीयकार्यकर्तृत्वात्तस्य सद्भावोऽनुमीयते| आगमाच्च| अथवा यो रसः प्रधानरसस्यान्ते किञ्चिद्व्यक्तोऽप्युपलभ्यते सोऽनुरसः ||(Indu Commentary on A.S.Su.17/3)

The Rasa which is not explicitly evident in a substance but exists within it due to the dominance of the primary rasa, remains latent is considered as Anurasa. This latent presence of Anurasa can be inferred based on the inherent nature of

the primary rasa and its existence is confirmed through inference and Agama. It is mentioned that Anurasa can be identified if it becomes slightly perceptible towards the end or if a distinct taste is found within the primary rasa.

विपर्ययेणानुरसो रसो नास्ति हि सप्तमः || (Cha.Su.26/ 28)

In the Atreyabhadrakapiya Adhyaya, Acharya Charaka has provided the information about Anurasa after describing the characteristics of Rasa, highlighted that the qualities of Anurasa is contrast to those of Rasa. Hence, the taste which cannot be perceived in the beginning or which is perceived at the end by the tongue through contact of a dry substance is known as Anurasa. Importantly, he clarifies that Anurasa is not considered as the seventh rasa.

यस्तूक्तावस्थाचतुष्टयेऽपि व्यक्तो नोपलभ्यते, किन्तर्ह्यव्यपदेश्यतया छायामात्रेण कार्यदर्शनेन वा मीयते, सोऽनुरस इति वाक्यार्थः| यतश्च मधुरादय एव व्यक्तत्वाव्यक्तत्वाभ्यां रसानुरसरूपाः, अतोऽव्यक्तो नाम सप्तमो रसो नास्ति | (Chakrapani Commentary on C.S.Su.26/ 28)

Even though Anurasa may not be explicitly perceivable within the four states (i.e. in the beginning, end, wet form and dry form), it can be inferred through indirect characteristics or by observing its effects. Tastes like sweet and others are characterized by their presence or absence of specific attributes, indicating that Anurasa is intricately linked to these primary tastes. Therefore, it implies that there is no separate seventh taste because Anurasa is fundamentally connected to the existing ones.

Example for Anurasa : Madhura as Anurasa in Pippali

यथा- पिप्पल्या आर्द्राया मधुरो रसो व्यक्तः, शुष्कायास्तु पिप्पल्याः कटुकः; तेन कटुक एव रसः पिप्पल्याः, मधुरस्त्वनुरसः | (Chakrapani Commentary on C.S.Su.26/ 28)

Pippali fruit when it is wet, it exhibits a Madhura rasa (sweet taste). However, when it is dry, Pippali has a Katu rasa (pungent taste). Thus, Katu rasa is the main Rasa of Pippali whereas Madhura is the Anurasa.

Interpret relevance of Anurasa in clinical practice

1) Anurasa helpful for balancing the doshas in the body.

Example 1:

अम्लं समधुरं तिक्तं कषायं कटुकं सरम् | चक्षुष्यं सर्वदोषघ्नं वृष्यमामलकीफलम् || हन्ति वातं तदम्लत्वात् पित्तं माधुर्यशैत्यतः | कफं रूक्षकषायत्वात् फलेभ्योऽभ्यधिकं च तत् || (S.S.Su.46/143 -144)

The drug Amalaki acts as Tridoshashamaka. Classical texts emphasize the benefits of both its Rasa (Amla) and Anurasa (Madhura, Tikta, Kashaya, Katu) for this purpose. Due to Amla rasa it act as Vatashamaka. Due to Madhura Anu-

rasa it act as Pittashamaka. Due to Kashaya Anurasa it act as Kaphashamaka. This highlights the crucial role of Anurasa in maintaining dosha equilibrium within the body.

Example 2:

कषायाऽम्लाचकटुकातिक्तामधुर रसान्विता | इतिपञ्चरसापथ्यालवणेनविवर्जिता ||

अम्लभावाज्जयेद्वातंपित्तंमधुरतिक्तकात् | कफंरूक्षकषायत्वात्त्रिदोषघ्नीततोऽभया ||

(D.N.Guduchyadivarga/234 - 235)

The drug Haritaki acts as Tridoshashamaka. The Classical texts mentions that both its Rasa (Kashaya) and Anurasa (Amla, Katu, Tikta, Madhura) contribute to its Tridoshashamaka action. Due to Amla Anurasa it act as Vatashamaka. Due to Madhura and TiktaAnurasa it act as Pittashamaka. Due to Kashayarasa it act as Kaphashamaka. This highlights the vital importance of Anurasa in maintaining dosha equilibrium within the body.

2) Anurasa helpful for performing the pharmacological action by the drug

Example :

मधु च श्लेष्माणं जयति, रौक्ष्यात्तैक्ष्ण्यात् कषायत्वाच्च; श्लेष्मा हि स्निग्धो मन्दो मधुरश्च | (C.S.Vi.1/14)

Madhu has Madhurarasa and Kashaya Anurasa. Due to its Kashaya Anurasa, Madhu helps in Lekhana Karma.

4.9. Rasa Sevanakrama of Aushadha

The Kashyapa Samhita, particularly in the 'Rasadoshavibhagiya' chapter of the 'Khilasthana' provides detailed guidance on using Rasas (tastes) in a specific sequence to manage diseases based on the predominance of Doshas. Ayurveda emphasizes the importance of tailoring treatments to the individual's unique constitution and the dosha imbalance in their body. The specific order and selection of Rasa dominant medicines are indeed crucial for restoring dosha equilibrium and promoting healing. This personalized approach is a fundamental aspects of Ayurvedic medicine.

Order of Administration of Rasa Dominant Medicines in Kaphajavyadhi:

कटुतिक्तकषायांस्तु रसान् प्राज्ञो यथाक्रमम् । योगतः कफजे व्याधौ भैषज्यमवचारयेत्॥ (K.S.Ki. 6/ 24-25)

A skilled Vaidya often administers substances or medicines that are predominant with Katu, Tikta and Kashaya Rasa systematically to treat diseases that are caused due to Kapha Dosha.

Justification for the use of Rasa in the said order to treat diseases due to Kapha Dosha:

1) In Kaphaja vyadhi, it is often recommended to administer Katu rasa Pradhana medicines at the beginning of the treatment as it has the ability to quickly reduce properties like Paichailya (sliminess) and Gaurava (heaviness) associated with vitiated Kaphadosha.

   प्रयुक्तः कटुकः पूर्वं पैच्छिल्यं गौरवं चयत् । श्लेष्मणस्तं निहन्त्याशु (K.S.Ki. 6/ 25- 26)

2) Tikta rasa Pradhana medicines are recommended in the middle of treatment procedures as it helps to relieve Aasyamadhurya (sweetness in the mouth) and dries up excess Kaphadosha.

   तिक्तस्तस्मादनन्तरम्॥

   ह्रासयत्यास्यमाधुर्यं कफं संशोषयत्यपि। (K.S.Ki. 6/ 26)

3) At last, Kashayarasa Pradhana medicines are to be administered in disorder related to vitiated Kapha dosha, as it thickens the Kapha and helps in removing excess moisture (Sneha).

   संगृह्णातिकषायश्च स्नेहं चास्यावकर्षति॥ (K.S.Ki. 6/ 27)

Order of administration of rasa dominant medicines in Pittajavyadhi:

   तिक्तस्वादुकषायाः स्युः क्रमशः पैत्तिके हिताः। (K.S.Ki. 6/27)

To treat diseases caused by Pitta Dosha, the medicines that possess Tikta, Swadhu (Madhura) and Kashaya Rasa are to be ideally administered in the mentioned order.

Justification for the use of Rasa in the said order to treat diseases due to Pitta Dosha:

1) Administration of Tikta rasa Pradhana medicines are advised initially in Pittaja diseases as a part of the treatment as it helps in quick Amapachana.

   आमान्वयत्वात् पित्तस्य पूर्वं तिक्तोऽवचारितः । पाचयत्याशु (K.S.Ki. 6/ 28)

2) Then, Madhurarasa Pradhana medicines are advised after Ama Pachana, in Pittaja vyadhi chikitsa as it helps in subsiding the Pitta by its properties like Sheeta, Guru, Sneha and Madhuryata.

   ....तं पक्वं ततस्तु मधुरो रसः॥ शैत्यात् रुत्वात्स्नेहाच्च माधुर्याच्च नियच्छति। (K.S.Ki. 6/28- 29)

3) In the end, Kashaya rasa Pradhana medicine are to be administered, as it helps in Shoshana (drying up) of excess Dravatva of Pitta dosha through its properties like Ruksha and Vishoshibhava.

   तद् द्रवत्वविघातार्थं कषायश्चावचारितः॥ रौक्ष्याद्विशोषिभावाच्च विशोषयति तैजसम्। (K.S.Ki. 6/ 29- 30)

Order of administration of rasa dominant medicines in Vataja disease:

   वातिके क्रमशो योज्याः पट्वम्लमधुराः रसाः। (K.S.Ki. 6/30)

To treat diseases caused by Vata Dosha, the medicines that possess Patu (Lavana), Amla and Madhura Rasa are to be ideally administered in the mentioned order.

Justification for the use of Rasa in the said order to treat diseases due to Vata Dosha:

1) In Vataja diseases, it is advised to administer medicines with Lavana rasa initially as they provide moisture to the effected parts (Prakledibhava), Ushna and Guru Guna of Lavana Rasa subsides Vibandha, Sheeta and Laghu Guna of Vata dosha respectively.

   वातिके लवणः पूर्वं संयोगादवचारितः॥ प्रक्लेदिभावाज्जयति विबन्धं मातरिश्वनः।

   निहन्ति शैत्यमुष्णत्वाद्गुरुत्वाच्चापि लाघवम्॥ (K.S.Ki. 6/ 31-32)

2) Then, Amla rasa pradhana medicines are advised in Vatajavyadhi. Due to the Teekshna, Snigdha and Ushnaguna of Amlarasa substances, the condition like blocking of pathways (Srotoavarodha) is relieved and the normalize the movement of the Vatadosha in the Anuloma direction.

   तथैवाम्लो रसः पश्चात्तस्मिन्नेवावचारितः। जडीकृतानि स्रोतांसि तैक्ष्ण्यादुद्धाट्यमारुतम्॥

   अनुलोमयतिक्षिप्रंस्निग्धोष्णत्वाद्विमार्गगम्। (K.S.Ki. 6/ 33-34)

3) Finally, Madhura rasa Pradhana medicines are to be administered. Due to the Guru, Picchila and Snigdha Guna of Madhurarasa, it subsides Laghu, Visada and Ruksa Guna of Vata Dosha.

   अम्लादनन्तरं पश्चात् प्रयुक्तो मधुरो रसः॥ वायोर्लघुत्वं वैशद्यं रूक्षत्वं च व्यपोहति।

   गुरुत्वात् पिच्छिलत्वाच्च स्निग्धत्वाच्च यथाबलम्॥ इत्युक्ताः सर्वरोगेषु रसानां प्रविचारणाः। (K.S.Ki.6/ 34-35)

4.10. GLOSSARY

To summarize the chapter here are the few important points –

- Rasa is special sense known through the Rasanendriya. The word rasa is also referred in Ayurvedic literature for Parada, Rasadhatu and Swarasa of the drug.
- Shadrasa are classified as Saumya and Agneya rasa; Snigdha and Ruksha rasa; Guru and Laghu rasa; Dosha Shamaka Rasa and Dosha Vardhaka Rasa.
- Ap and Prithvi Mahabhuta are responsible for the manifestation of rasa and the remaining Bhutas such as Akasha, Vayu and Agni are contributing to the distinction and cognition of Rasa.

- Rasa of a substance can be determined immediately when a substance comes in contact with the tongue.
- Pathway of taste perception involves Mechanism of stimulation of Taste buds, Generation of nerve impulses by the taste bud and Transmission of taste signals into the central nervous system
- Taste sensation receptors are chemoreceptors, found mainly on tongue. Also, located outside the oral cavity, including the stomach, intestines, liver, pancreas, respiratory system, heart, brain, kidney, urinary bladder, adipose tissue, testis, spermatozoa, lymphocytes and endocrine glands.
- Rasa Lakshana

Rasa	Lakshana
Madhura	Snehana, Preenana, dehasyahlaadana, Maardava, Parithoshamutpadayati, Tarpayati, Jeevayathi, Mukhopalepamjanayati, shleshmajanana, Akshaprasaadana, Priyahapipilikaadhinam, Kantatarpana
Amla	Dantaharsha, Romaharsha, Mukhasrava, Swedana, Mukhabodhanat, Vidaahaat Aasyakantasya, Shraddhamutpadayathi, Akshinikochana, Bhruvanikochana, Prasraavana, Prakledana
Lavana	Shigrampraleeyan, Kledamkuruthemukhe, syandayathiaasyam, Maardavamkuruthemukhe, Vidaahaan Mukhasya, Bhakta ruchimutpaadayathi, Kaphaprasekamjanayathi, Kapola gala daahakrit, Visarana, Ushnatva, Prasechana
Tikta	Rasanamprathihanthi, Svadate Na, Mukhavaisadyakaaraka, Shoshakaaraka, Prahladakaaraka, Choshamutpadayathi, Bhakta ruchimaapadayathi, Harshana, Harimataa, Shaityamaasyasya, Galadwarashoshana
Katu	Samvejayathirasaanaam, Nipaathe Tudathiiva, Sraavayathiakshinaasaaasya, Udvejayathijihvaagram, Udwegamjanayathi, Shirograha, Naasasraava, Chimichimaayathikantakapolam, Kapalodahateeva, Vidahathideham, Jihvaghranabaadha
Kashaya	Vaishadya, Jihvastambhayathi, Jadyatrasanam, Kantasrotovibandhakrit, Vikaasyapi, Mukhaparishosha, Hridayamkarshathi, Peedayathihridayam, Shleshmasamvrutti, Gaurava

- Guna of each Rasa

Rasa	Guna
Madhura	Snigdha, Sheeta, Guru, Mridu
Amla	Laghu, Ushna, Snigdha, Vyavayi
Lavana	Naatyartha Guru, Snigdha, Ushna, Teekshna
Katu	Laghu, Ushna, Ruksha, Teekshna
Tikta	Ruksha / Naatiruksha, Sheeta, Laghu
Kashaya	Ruksha / Atiruksha, Sheeta / Hima, Alaghu / Guru

- Karma of each rasa on dosha, dhatu and mala with examples

Rasa	Dosha Karma	Dhatu Karma	Mala Karma	Example
Madhura	Kaphakara, Pittaghna, marutaghna	Sarva dhatu vivardhana, balya, preenana, Jeevana, Aayushya, brihmana, sthairyakara, keshya, stanyavardhana	srishta vin mutra	Guda, Ikshu, Madhuka, gritha, Swarna
Amla	Pavananigrahana, karothikapha, karothi Pitta	Brihmana, Preenayathi, karothiasram	srishta vin mutra	Amalaki, Amlika, Amrataka, Takra, Rajata
Lavana	Vatahara, Kaphamvishyandayathi	Shoshana, Vikashi, swedana, snehana, bhedakrit	srishta vin mutra	Saindhava, Sauvarchala, Vida, Romaka, Shisa
Katu	Shleshmaanamshamayathi, Pittakara, Vatakara	Sthaulyaprashamana, Mamsamvilikhathi, medasaamupahanta, shukraupahanta, Sneha kledashoshana, Lekhan, Stanyaupahanta	swedaupahanthi, malaanupahanthi, baddha mala	Maricha, Vidanga, Panchakola, Manashila, Pitta and mutra of chaga

Tikta	Pitta shleshmaupashoshana, Vatakara	Twakmaamsayohosthirikarana, Lekhana, Kledameda vasa majjalaseekaupashoshana, Stanyashodhana	sweda mutra purishaupashoshana, baddha mala	Bhunimba, Nimba, Haridra, Guduchi, Kaamsya
Kashaya	Shleshmaprashamana, Pitta prashamana, Vatakara	Sandhanakara, Ropana, Shoshana, Shareerakledasyaupayokta, Lekhana, Kledaupashoshana, raktaprashamana, preenana, medavishoshana	baddha mala	Haritaki, Vibhitaki, Shirisha, Madhu, Mukta

- Rasa Atisevanajanyavyadhi

Rasa	Dosha Prakopa	Diseases caused
Madhura	Kapha	Sthaulya, Mardava, Aalasya, Atiswapna, Gaurava, Anannabhilasha, Agni daurbalya, Swasa, Kasa, Pratisyaya, Shitajwara, Alasaka, Aanaha, Aasyamaadhurya, Vamathu, Sanjnapranaasha, Swaranasha, Aasyakantayohomamsaabhivriddhim, Galaganda, Gandamala, Galashopha, Galaroga, Shlipada, Basti-dhamani-galopalepa, gudopalepa, Akshyamaya, Abhishyandha, Krimi, Arbudha, Prameha, Udarda, Murdharuk, Peenasa, ShteevanaMedaroga and Kaphajavikara.
Amla	Pitta	Dantaharsha, Tarshayathi, Nayana sammeelana, Romasamvejana, Kaphamvilayana, Pittamabhivardhayathi, Raktamdushayathi, Mamsamvidahathi, Shareerashaithilyaanaapaadayathi, Ksheenakshatakrishnadurbhalaanaamswayathumaapaadayathi, paridahathikantamurohridayam, Kandu, Panduthа, Raktadrigvighataan, Kshatavihitavisarpa, rakta Pitta, Pipasa, taijasatvaatbhrama, timira, jwara, Due to hot potency induces suppuration in the conditions like kshata, abhihata, dasta, dagdha, bhagna, shuna, prachyutha, avamutrita, parisarpita, mardhitha, chinna, bhinna, vishlista, udviddha and utpista.
Lavana	Pitta	Pittamkopayathi, Raktamvardhayathi, Tarshayathi, Murcha, Taapa, Dhaarayathi, Kushnaathimaamsaani, Pragaalayathikushtaani, Vishamvardhayathi, Shophaansphotayathi, Danthanscyaavayathi, Pumstvamupahanthi, Indriyopataapa, Vali palitakhalityamaapaadayathi, Rakta Pitta, Amla Pitta, Vatarakta, Vicharchika, Indralupta, Gaatrakandu, kusta, Kota, Kitibha, Visarpa, Vaivarnya, Shopha, Mukhapaaka, Akshipaaka, amleekaa, Trishna, Akshepa, Rodha, kshatavishamadavriddhi, Kshapayathibalamojaha.
Katu	Vata	Vipakaprabhavaatpumstvamupahanthi, Rasa viryaprabhavaatmohayanthi, Glaapayathi, Dehasaada, Karshaya, Mada, Murcha, Namyathi, Tamayathi, Bhrama, Kantamparidahathi, Shareerataapamupajanayathi, Shukrabalakshayam, Trishna, Gala taaluoshtashosha, Daha, Vami, Aakunchana, Vayu Agni gunabaahulyat it produces bhrama, davathu, kampa, toda, bheda in the charana, bhuja, paarshva and prashta, maarutajavikaara.
Tikta	Vata	Raukshya Kharavishadaswabhaavaat it does dhatukshaya, Srotasaamkharatvamupapaadayathi, Balamaadatthe, Karshaya, Glapayathi, Moha, Bhrama, Vadanamupashoshayathi, Gaatrastambha, Manyastambha, Aakshepaka, Ardhitha, Shirashula, Todha, bhedha, Chedha, Aasyavairasya, Murcha, Vataroga.
Kashaya	Vata	Aasyashosha, Hridayapeeda, Udara aadhmaana, Vaakyagraha, Srothorodha, Shyavatva, Pumstvamupahanthi, Vishtambha, Vata vin mutra sangam, Shukroparodha, karshaya, Glapayathi, Tarshayathi, Stambha, Manyaaskarshaya, Glapayathi...

- Taste in a subtance which are not clearly manifest or which are understood (recognised) at the end are anurasa.
- Rasa Sevanakrama of Aushadha at a glance

Vyadhi	Prayoga Kala	Prayok-tavya Rasa	Justifaction for Rasa Prayoga
Kaphaja	Aadhi	Katu	quickly reduce properties of kapha like paichailya and gaurava
	Madhya	Tikta	relieves Aasyamadhurya and dries up excess kapha dosha
	Anta	Kashaya	it thickens the kapha and helps in removing snehamsa
Pittaja	Aadhi	Tikta	helps in quick Aamapachana
	Madhya	Madhura	it helps in subsiding the Pitta with its properties like shita, guru, sneha and madhuryata.
	Anta	Kashaya	it helps in shoshana of excess dravatva of Pitta through its properties like ruksha and vishoshibhava
Vataja	Aadhi	Lavana	prakledibhava, Ushna and guru guna of Lavana rasa subsides vibandha, shita and laghutwa of Vata respectively
	Madhya	Amla	Due to its teekshna, snigdha and Ushnaguna it relieves srotoavarodha and brings anulomanagati to Vata dosha
	Anta	Madhura	Due to its guru, picchila and snigdhaguna it subsides laghu, visada and ruksaguna of Vata

4.11. Exercise

Long Answers

1) Interpret pathway of taste perception & sites of taste receptors in the body
2) Write the Characteristics of all the six rasas
3) Explain karma of Madhura rasa on Dosha, Dhatu and Mala with examples.
4) Explain karma of Lavana rasa on Dosha, Dhatu and Mala with examples.
5) Explain karma of Tikta rasa on Dosha, Dhatu and Mala with examples.
6) Interpret Clinical application of Shadrasa.
7) Discuss research updates of Shadrasa.
8) Describe with justification Rasa sevanakrama as Aushadha.

Multiple Choice Questions

1. The Taste impulses that originating from the ....part of the tongue is reaching to the tractus solitarius through facial nerve.
   a. Anterior two-thirds   b. Back
   c. Posterior areas   d. Base
2. Chemoreceptors responsible for sweet taste is
   a. Epithelial sodium channel (ENaC)
   b. G protein coupled receptor (GPCR)
   c. Both
   d. Metabotropic glutamate receptor (mGluR4)
3. Udwejayathijihvagramkurvamchimichimaam is the lakshana of
   a. Amla rasa   b. Lavana rasa
   c. Kashaya rasa   d. Katu rasa
4. Which of the following rasa has laghuguna in superior leavel?
   a. Amla   b. Katu   c. Tikta   d. All
5. Which of the following rasa does not have 'Srista vin mutra marutha' karma?
   a. Madhura   b. Tikta   c. Amla   d. Lavana
6. MudhaVataanulomana is the karma of ....rasa
   a. Madhura   b. Amla   c. Lavana   d. Katu
7. 'Vishamvardhayathi' is due to excessive consumption of which of the following rasa?
   a. Katu   b. Amla   c. Lavana   d. Madhura
8. The knowledge of Kashaya Rasa in Madhu, Madhura Rasa in Udakais obtained by
   a. Aagamaat   b. Upadeshaat   c. Both   d. Anumanat
9. Which of the following set of rasa is Pittashamaka ?
   a. Madhura, Amla, Lavana   b. Madhura, Tikta, Kashaya
   c. Katu, Tikta, Kashaya   d. Madhura, Katu, Kashaya
10. Order of rasa sevana in Vatajavyadhi
    a. Katu, Tikta, Kashaya   b. Madhura, Tikta, Kashaya
    c. Lavana, Madhura, Amla   d. Patu, Amla, Madhura

Answer Key

1 a	2 b	3 d	4 c	5 b	6 b	7 c	8 c	9 b	10 d

Bibliography

1. Agnivesha (2011), Charaka Samhita, elaborated by Acharya Charaka and Drdhabala, with Ayurvedadipika commentary by Sri Chakrapanidatta, edited by Vaidya Yadavji Trikamji Acharya, Varanasi: Chaukhamba Surabharati Prakashana
2. Sushrutha (2013), Sushrutha Samhita, with the Nibandhasangraha Commentary of Sri Dalhanacharya and Nyayachandrika Panjika of Sri Gayadasacharya, edited by Acharya Yadavji Trikamji, Varanasi: Chaukambha Surabharathi prakshana
3. Vriddha Vagbhata (2016). Astanga Sangraha (2nd ed.). Sasilekha commentary by Indu. Prologue in Sanskrit and English by Prof. Jyotir Mitra. Shivprasad Sharma (ed.). Varanasi: Chowkhambha Sanskrit Series Office
4. Vagbhata (2010), Astanga Hridaya, with commentaries Sarvangasundara of Arunadatta and Ayurvedarasayana of Hemadri, edited by Pandit Hari Sadasiva shastri paradakara, Varanasi: Chaukhambha Surabharati Prakashan
5. Dr V. A. Dole (2008), Rasaratnasamucchaya (2ND ed.), translation and commentary in English. Varanasi : Chowkhambha Sanskrit Series Office
6. Mahendra Bhogika (2016), Dhanvantari Nighantu, Edited by Priyavrat Sharma, Translated by Guruprasad Sharma, Varanasi: Chaukhambha Orientalia
7. Bhadanta Nagaarjuna, Rasavaisheshika sutra, with Naarasimha Bhaashya, edited with an introduction by N.E. Muthuswami, Kerala : Published under the Authority of the Government of Kerala by Dr N Sridharan
8. Dr. S. C. Dhyani (2008), Rasa Panchaka, Varanasi : Chowkhambha Krishnadas Academy
9. Acharya Sharangadhara (2013), Sharangadharasamhitha, with Aadhamalladipika commentary and Kasiramas Gudarthadipika commentary, New Delhi: Chaukhambha Publication
10. K. Sembulingam, Prema Sembulingam (2010). Essentials of Medical physiology (5th ed.). New Delhi. Jaypee Brothers Medical Publishers (P) Ltd
11. John E Hall (2016). Gutyton& Hall Textbook of Medical Physiology (2nd South Asia ed.). Mario Vaz, Anura Kurpad, Tony Raj (ed.). New Delhi. Elsevier RELX India Pvt. Ltd.
12. Chandi Charan Chatterjee (1994). Human Physiology (Vol. II). Calcutta. A.K. Chatterjee, Medical Allied Agency.
13. Bhavamisra (2009), Bhavaprakasa, Edited with Vidyotini Hindi commentary by Pandit Brahma Sankara Misra, vol.2, Varanasi: Chaukhambha Sanskrit Bhawan
14. Sastry J.L.N (2012), Illustrated Dravyaguna Vijnana, Volu. I, Varanasi: Chaukhambha Orientalia, 2012
15. Sharma P.V (2005), Dravyagunavijnana, Vol.I, Varanasi: Chaukhambha Bharati Academy
16. Lu P, Zhang CH, Lifshitz LM, ZhuGe R. Extraoral bitter taste receptors in health and disease. J Gen Physiol. 2017 Feb;149(2):181-197. doi: 10.1085/jgp.201611637. Epub 2017 Jan 4. PMID: 28053191; PMCID: PMC5299619.

17. Bipin Vithal Sawant, TS Bairy, Shrikanth P Acharya, An Experimental Study to Determine the Rasapanchaka of Zornia gibbosa Span, Journal of AYUSH:-Ayurveda, Yoga, Unani, Siddha and Homeopathy, 2014, Volume 3, Issue 2, Pages 1-7
18. Bhuvad, Sushama B.; Karra, Nishteswar, Rasa assessment of 10 Madhuraskandha drugs by single-blind method, Indian Journal of Health Sciences and Biomedical Research (Kleu) 9(1):p 71-76, Jan–Apr 2016. | Doi: 10.4103/2349-5006.183692
19. Chougule Sharad D, Chougule Nilesh Vasant, A Study Of Taste Perception Of Madhura Rasa In Kaphadhikya Prakrti With Special Reference To Bodhakakapha, International Ayurvedic Medical Journal , IAMJ: Volume 4; Issue 02; February - 2016, page no 252-256.
20. Rama Jayasundar, Somenath Ghatak, Spectroscopic and E-tongue evaluation of medicinal plants: A taste of how rasa can be studied, Journal of Ayurveda and Integrative Medicine, Volume 7, Issue 4, 2016,Pages 191-197, ISSN 0975-9476,https://doi.org/10.1016/j.jaim.2016.09.003.
21. Akshay Kumar et.al., Analysis of Effect of Amla Rasa (Sour Food) in differentconcentrationson Mamsa Dhatu (Muscle Tissue), International Journal of Ayurveda and Pharma Research, July 2018, Vol 6, Issue 7 , Pg. No. 10-16
22. Joshi Mrudula Vinayak, Excess consumption of Lavana Rasa (Salty taste) – A cause of Amlapitta (Hyperacidity), International Journal of Ayurvedic Medicine, Vol 12 (4), 850-852
23. Vrddha Jivaka (2012). Kashyapasamhitha (reprint.). Revised by Vatsya, with Sanskrit introduction by Nepal Rajaguru Pandit Hemaraja Sarma. Hindicommentary Vidyotini by Srisatyapala Bhisagacharya. Varanasi. Chaukhambha Sanskrit Sansthan.

CHAPTER NO.: 5

CONCEPT OF VIPAKA

Dr. Mahesh T. S.

Objectives of the Chapter

1. Define Vipaka
2. State Vipakalaxana
3. Describe the action of Trividha Vipaka on Dosha, Dhatu and Mala with examples
4. Interpret Clinical application of Vipaka
5. State research updates of Vipaka
6. Explain Vipakopalabdhi (Determination of Vipaka) & Taratamya (Degree of variation)

Topics in the Chapter

1. Trividha Vipaka
2. Vipaka Karma on Dosha, Dhatu & Mala
3. Clinical application and Research updates
4. Vipakopalabdhi (Determination of Vipaka) & Taratamya (Degree of variation)

Introduction

All substances in the universe are complex structures or compound in nature and it is very much necessary for these to be converted into the simpler ones. It is because every substance can only be assimilated into the body system when they are completely simplified. This is resulted by the process of digestion where the conversions of complex material into simpler ones take place. On assimilation these simple substances are again reconstituted such that the substances are homogenous to the body tissues. In the science of Ayurveda this process is termed by the name Vipaka.

The word meaning of Vipaka is **'special product'** or **'Visishtapaka'**. It refers to a specific property that emerges due to the by-product or metabolite at the end of the process of digestion where a further change of the resulting by product or metabolite is never possible. In this event there is an emergence of a specific combination of Mahabhuta denoted by the names of Rasa, which can be considered as the one which indicates the dominant Mahabhuta in the resultant product. The tendency of the substance to get transformed into a specific end product or metabolite is the property of the substance present in it. This property is taken as Vipaka.

विशिष्टः जरणनिष्ठकाले रसविशेषस्य पाकः प्रदुर्भावः विपाकः । (Prashastapada)

Metabolism is the process which every substance whether food or medicine have to undergo so that it can be assimilated and obtain the desired benefits. The change is due to the fact that these substances are basically heterogenous in nature which have to be converted into homogenous compounds so that it can be assimilated into the body structures. In the present chapter we will be going through the details of the concept and process for better understanding.

Definition of Vipaka

जाठरेणाग्निना योगाद्यदुदेति रसान्तरम् । रसानां परिणामान्ते स विपाकः इति समृतः ।। (A.H.Su.9/20)

The reference regarding the definition of Vipaka explains it as the final outcome or the product obtained by virtue of the transformation due to the action of Jataragni. This is in the form of a Rasa (Nutritional fluid) that has undergone substantial changes. This Rasa (Nutritional fluid) is different from the Rasa (Nutritional fluid) that was formed as a result of the Jataragni action. Hence this Rasa (Nutritional fluid) which is end product of metabolism is known as Vipaka.

Shivadas sen gives much more clarity on the aspect of Rasa (Nutritional fluid) that is considered as Vipaka by emphasizing that it is different from the one that results at the end of Avasthapaka.

अवस्थापाकापेक्षया विशिष्टः पाको विपाकः । (Shivadas Sen Commentary on S.S.Su.40/10)

Thus it clearly indicates that the concept of Vipaka envisages two processes within itself namely the Avasthapaka and the Nishtapaka.

Substances those are edible, whether foods or medicines have to undergo the process of metabolism. These ingested substances contain certain constituents that have the capacity to disintegrate into simpler ones and are water soluble in nature. As a result it gets readily absorbed into the blood as soon as they

come in contact with the tongue. They by-pass the normal process of digestion and assimilation. Still these constituents have to get transformed to an extent that they are homogeneous to the body tissues and constituents. This is possible by the process of Nishapaka or metabolism. Such classes of substances that possess these types of constituents are known as Veerya Pradhana Dravya or Aushadha. Hence the activity that is brought about by this class of substances is quick, precise and invasive. Depending on the presence of constituents that can disintegrate or dissolve both and get absorbed directly by bypassing the normal process of digestion in the substances, the gradation of potency of the drugs is done.

While on its contrary when substances are not in possession of such components in them or if present, in small quantities, then they have to be passing the normal process of digestion, assimilation and metabolism. These classes of substance are known as Rasa Pradhana Dravya or Aahara. In this context the word **'Rasa'** refers to the bye product of digestion or Avasthaapaaka, which is nutritive in nature. These substances initially are digested where they are converted both physical and chemical breakdown into simpler forms. The 'Rasa' that is formed is known as 'Ahararasa'. This is not the Rasa that is taken as Vipaka because it will undergo a series of transformation to reach the end metabolite. After absorption, the process becomes more or less the same as that of Aushadha substances with difference in their effects.

In either of the case, the absorbed constituents have to be subjected to the process of metabolism or Nishtapaka. The resultant metabolite that is formed after the end of the process is known as Vipaka. Again this depends on the composition of the dominant Mahabhuta which determines the type of Vipaka that is whether Madhura, Amla or Katu. In this case either of the three will result. But the process of Avasthapaka to which all types of food substances and some of the drugs with mild or moderate potency is subjected to Madhura Avasthapaka, Amla Avasthapaka and Katu Avasthapaka simultaneously.

Hence, Vipaka in Dravyaguna can be defined as ***"The property of the substance formed at the end of the transformation by virtue of metabolism is Vipaka, where further changes of the substance and its properties cease to occur".***

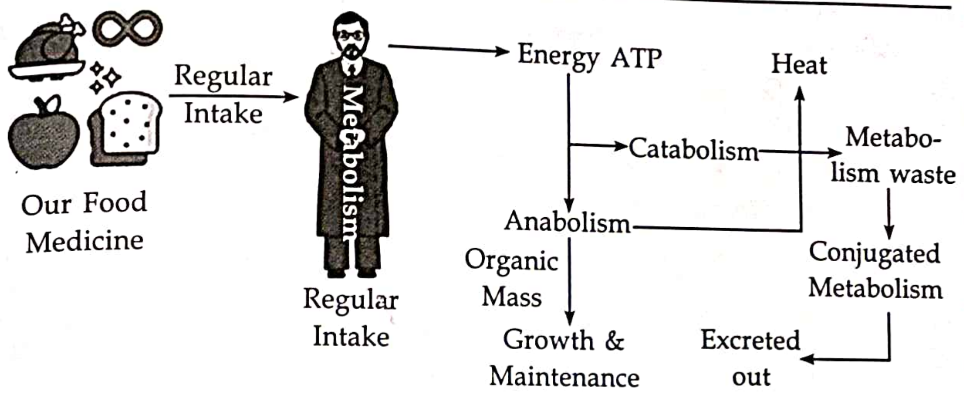


Figure No.1 Summary of Vipaka Process

5.1. Trividha Vipaka

Concept of Trividha Vipaka

त्रिधाविपाको द्रव्यस्य स्वाद्वम्लकटुकात्मकः । (A.H.Su.1/17)

वस्तुतस्तु दोषाणां त्रविध्याद्विपाकस्यापि तदनुगुणतया त्रैविध्यमेवोचित्तम् । (Yogendranath Commentary)

The theory is propagated by Charaka and Vagbhata who belong to the Atreya school of Ayurveda. According to this theory "Substances which possess the 6 Rasa will undergo considerable changes and results in three types of Vipaka in accordance with that of Rasa". Thus, substance that possess Madhura and Lavana Rasa will result in Madhura Vipaka, substance that possess Amla Rasa will result in Amla Vipaka and substances that possess Katu, Tikta and Kashaya Rasa will result in Katu Vipaka. The theory is accepted by majority of texts as it is formulated on the basis of the Tridosha theory. Accordingly, each Vipaka represents each Dosha and will nourish the respective components of the body. Parashara accepts the same theory with a slight modification. According to him, Katu and Amla Rasa will result in their respective Vipaka while others will result in Madhura Vipaka itself.

As noted earlier, the substance which are either food or medicine undergoes a series of changes after their administration in the body. The sum total of all the processes that take place in the body is the process of Vipaka while the effect that is observed at the end of the process is known as Vipaka property. Thus, the process is rightly equated to the term 'Metabolism' which is defined as "The whole sum of reactions that occur throughout the body within each cell and that provide the body with energy which is used for vital processes and the synthesis of new organic material".

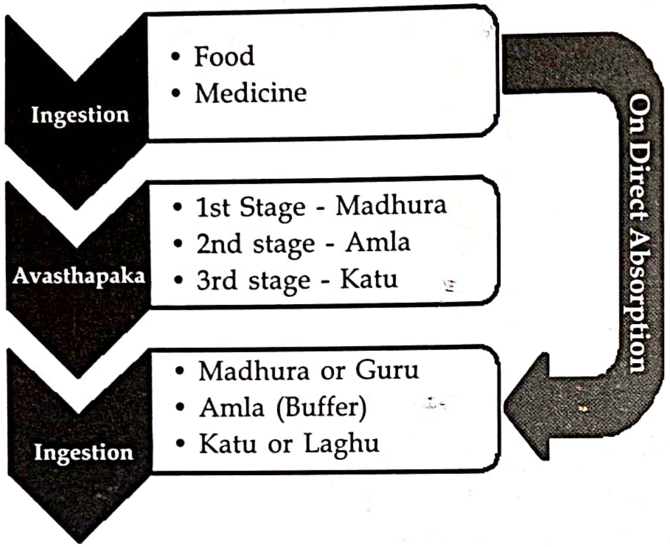


Figure No.2 Stages of Vipaka Process

Stages of Vipaka

From the earlier contexts it is quite evident that the Vipaka in total occurs in two different stages namely

1. Avasthapaka or digestion
2. Nishtapaka or Cellular metabolism (Includes both Anabolism and Catabolism)

AVASTHAPAKA -

अन्नमादान कर्मातु प्राणः कोष्ठं प्रकर्षति । तद्द्रवैर्भिन्नसंघातं स्नेहेन मृदुतां गतम् ।।
समानेनावधूतोऽग्निरुदर्यः पवनेन तु । काले भुक्तं समं सम्यक्पचत्यायुर्विवृद्धये ।।
एवं रसमलायान्नामाशयस्थमधः स्थितः । पचत्यग्निर्यथा स्थाल्यामोदनायाम्बुतण्डुलम् ।। (C.S.Ch.15/6-8)

तत्र पाञ्चभौतिकस्य चतुर्विधस्य षड्रसस्य द्विविध वीर्य्यस्याष्टविधवीर्य्यस्य वाऽनेकगुणस्योपयुक्तस्याहारस्य सम्यक्परिणतस्य यस्तेजोभूतः सारः परमसूक्ष्मः सरसेत्युच्यते । (S.S.Su.14/3)

The Avasthapaka is the first stage of Metabolism known as Digestion. Here it is known as Avasthapaka because of fact that all the substances undergo physical and chemical breakdown simultaneously that appear to be in stages. The stages are not restricted to a particular component of the ingested substance but to all where the resultant mixture is known as 'Ahararasa'. This Ahararasa is the prerequisite for the purpose of absorption into the body system. The whole process of Avasthapaka is generally and rightly equated to the process of 'Digestion' by many contemporary and modern authors of Ayurvedic texts.

Digestion is defined as "The process of mechanically and enzymatically breaking down food into substances for absorption into the bloodstream". Through the process of digestion it is the macronutrients namely proteins, carbohydrates and fats that are broken down into aminoacids, monosaccharides and fattyacids. Along with these the micronutrients namely the minerals, vitamins and fluids also are absorbed into the blood stream.

The Avasthapaka starts from the point of ingestion itself where there will be more of physical breakdown due to mastication than chemical process. This is summarised by Acharya Sushruta and Charaka in different manner. Here the Sushruta's opinion is on the substance that is being subjected to the changes while the Charaka's opinion is on the process of digestion. With respect to Dravyaguna, Sushruta's opinion appears to more relevant but with respect to the understanding of the process or Pharmacokinetics both the references are important to understand.

The relevance of Trividha Vipaka is in both the stages of metabolism but its explanation is more clearly understood with respect to Avasthapaka. Hence, the avasthapaka is explained on the basis of Trividha Vipaka.

Madhura Avasthapaka-

अन्नस्य भुक्तमात्रस्य षड्रसस्य प्रपाकतः । मधुराद्यात् कफो भावात्फेनभूतमुदीर्यते ।। (C.S.Ch.15/9)

The first stage of digestion which starts immediately after the ingestion of the food is the Madhura Avasthaapaaka. In this stage the substance that are ingested by the individual are subjected to physical breakdown primarily and even chemical breakdown of the substance to some extent. Hence, this can also be considered as Aamaavasthaa. All substances that are used as food or medicine are composition of the 5 Mahabhuta, and the combination of the two dominating ones among them are denoted by the 6 Rasa that manifest as soon as the ingestion of the substances take place.

In this phase of digestion, the substances are masticated by the chewing and grinding action of the mouth, along with which the mixing of Kapha (Bodhaka Kapha) present in the tongue and secreted by the salivary glands takes place. This leads to a condition of the mixture which is dominant with Ap and Prithvi Mahabhuta. Accordingly, the Rasa that results due to the dominance of the two is Madhura. Thus, this phase of digestion where the mixture of various substances that attain Madhura Bhava or a condition that gives rise

to dominance of the factors that form Madhura Rasa is named as Madhura Avasthapaka. It is a known fact from the concept of Physiology, that these two dominant Mahaabhuutas are instrumental in the formation of Kapha Dosha. Hence, the mixture that has resulted on completion of the same will give rise and nourish Prakruta Kapha Dosha.

This phase of digestion takes place in the region between the oral cavity and fundal region of the stomach. In this region, the ingested food or medicinal substance is subjected to physical breakdown by mastication and chemical breakdown by the action of Saliva and mucous that is secreted in the region. The contents of the mouth are then passed on to the stomach through the oesophagus.

Among the various principle components of the diet, the carbohydrates are present in the form of polysaccharides, disaccharides and some monosaccharide. The digestion of these briefly occurs in the mouth due to the action of Ptyalin. Infact, it is the only nutrient which is being digested in mouth for a significant extent. The action of Salivary Amylase/Ptyalin is inactivated in high acidic media of the stomach, where the degradation of carbohydrate or starch is stopped.

Amla Avasthapaka–

परं तु पच्यमानस्य विदग्धस्याम्ल भावतः । आशयच्यामानस्य पित्तमच्छमुदीर्यते ।। (C.S.Ch.15/10)

This is the second phase of digestion that starts immediately on completion of the first phase. It is a very important phase of digestion among the three because it is here that the substances are subjected to intense digestion and then on completion of the same, the bifurcation of Sara and Kitta parts of the ingested substances are differentiated. The necessary nutrients called as Sara are absorbed by the system of the body, while the unwanted residue, called as Kitta is passed on for excretion. It is in this phase that the Agni mainly in the form of Pachaka Agni (Digestive enzymes and other secretions that take part in Digestion like Bile juice and act irrespective of the substance) plays an important role resulting in the digestion of the substance. In this phase, the substances of various natures are digested completely by the action of Paachakagni and Bhutagni (Digestive enzymes and other secretions that take part in Digestion like Proteases that act on specific component of the substance). The action of the Bhutagni is seen after the action of Pachakagni or Jataragni. The Bhutaagni digests the respective Bhutamshas present in the ingested substance and are very specific in nature.

In this phase that the substances that are ingested and has already been broken down physically due to the process of mastication is subjected to complete chemical degradation and made suitable for the purpose of absorption. The chemical degradation of the large molecules like the carbohydrates, fats and proteins generally is dominant. Hence, the stage is also known as Pachyamanavastha.

As this phase is more dominant with Agni and the exhibition of its characters mainly digestion is seen. As Amla Rasa is formed by the contribution of Agni and Prithvi or Agni and Jala Mahabhuta. In which ever is the case the dominance of Agni Mahabhuta is more emphasized. Hence the phase is said as Amla Avasthapaka and the resulting mixture attains Amla Bhava. Agni Mahaabhuuta is also instrumental in the production of Pitta Dosha also. Thus, this phase of digestion of substances will nourish the Prakruta Pitta Dosha.

This phase starts from the body of stomach till the end of small intestine or till the region of ilioceacal junction. The ingested substance especially food is held in the stomach until provision is made for the continuance of action by Gastric juice. The pylorus opens after a few minutes (usually 30 minutes) of the meal. The stomach is completely emptied in 3 hours on an average and the time depends on the type of meal. The HCl present in the gastric juice mixes with the contents of the stomach. This makes the contents to possess high acidic concentration that results in the opening of the gastric side of the pyloric sphincter while its high concentration on the duodenal side leads to its closure. In this level the ingested substance is known by the term **Chyme**.

It is in this region that the secretions like the gastric juice, pancreatic juice, intestinal juice and the bile juice are secreted here, that play a major role in greater part of digestion. The secretions contain various enzymes which help in the breakdown of carbohydrates and proteins mainly.

The digestion of carbohydrate is inactivated in the stomach, but when the dietary contents of the stomach on reaching the small intestine are neutralized by bicarbonate, produced by the pancreas. The Pancreatic Amylase acts on starch and continues the digestion process. The final digestion of disaccharides and oligosaccharides to the simple monosaccharide primarily occurs at the mucosal lining of the upper jejunum. This is carried out by **Oligosaccharidases** and **Disaccharidases**. In general the digestion of carbohydrate is resulted from hydrolysis of **Glycosidic bonds** which is carried out by a group of enzymes called as **Glycosidases**. The specificity of the enzyme depends on the bond,

structure and configuration of the monosaccharide units. The capacity of most of these enzymes is much greater than required for the digestion of the respective substrates.

The Proteins are degraded and digested by a class of enzymes namely **Hydrolases** which specifically cleave the peptide bonds, hence they are also known as **Peptidases**. These are of two types namely:

1. **Endopeptidases** or **Proteases** which break the internal peptide bonds and release peptide fragments.
2. **Exopeptidases** which act on the peptide bonds of terminal aminoacids and release peptide frangments.

The proteolytic enzymes known as **Proteases** in common are responsible for the digestion of proteins are produced by the stomach, pancreas and the small intestine. The absence of proteases in the Saliva is the reason as why proteins are not digested in mouth. Basically it begins in the stomach by the secretion of Gastric Juice which consists of **HCl** and a proenzyme Pepsinogen. The acid performs two important functions namely denaturation of proteins and killing of certain micro-organisms. The denatured proteins are more susceptible to proteases for digestion.

Pepsin secreted in the stomach is an acid-stable endopeptidase. The secretion is in the form of inactive **Pepsinogen**, which is converted to an active form either by autocatalysis or by Gastric Juice HCl. Pepsin digestion of proteins results in peptides and few amino-acids which act as stimulants for the release of **Cholecystokinin** from the duodenum.

In the duodenum, the release of **Cholecystokinin** and **Secretin** initiates the release of proteases of Pancreatic Juice and its conversion to an active form. The combined action of pancreatic proteases which are active in a neutral pH results in the formation of free amino-acids and small peptidases. In the small intestine the release of **Aminopeptidases** and **Dipeptidases** act on amino-acids and dipeptides respectively to produce free amino-acids.

The digestion of lipids carried out by the enzymes known as **Lipases**. It is initiated in the stomach catalyzed by acid stable lipase which can degrade fat containing short fatty acids at neutral pH.In stomach, the digestion of lipids is very negligible especially in adults as the lipids are not made ready for lipase action because they are not emulsified.

Emulsification is the phenomenon of dispersion of lipids into smaller droplets due to reduction of surface tension. It is essential for effective digestion of lipids, since the enzymes can act only on the surface of lipid droplets. The process of emulsification occurs by three complimentary mechanisms namely:

1. Detergent action of Bile Salts
2. Surfactant action of Degraded lipids
3. Mechanical mixing due to peristalsis.

Bile salts interact with lipid particles along with the aqueous duodenal contents and convert them into smaller particles. Further, they stabilize the smaller particles by preventing them from mingling.

The initial digestive product of lipids namely free fatty acids, monoacylglycerols along with phospholipids are known as **Surfactants**. These promote emulsification, by getting absorbed to the water lipid interfaces and increase the interfacial area of lipid droplets. Thus, the initial action of the enzyme **Lipase** helps in further digestion of lipids. The emulsification of lipids is also aided by the mechanical mixing in intestines due to peristalisis. The smaller lipid emulsion droplets form good substrates for digestion.

The pancreatic lipases are primarily responsible for degradation of dietary Triglycerols, Cholesteryl esters and Phospholipids. It is the major enzyme that digests dietary fats. The digestion of these gives rise to 2-monoacylglycerol, cholesterol and lysophospholipid. These are again redigested by specific enzymes and converted into fatty acids.

For the absorption of lipids the bile salts play an important role. They combine with them to form compounds smaller than lipid emulsion droplets known as **Micells**, where they exert a soluble effect on lipids. They are then absorbed through intestinal mucosal cells. The absorption is almost completer for monoacylglycerols and free fatty acids which are slightly water soluble.

The lipids are again synthesized in the intestinal cells and are hydrophobic in nature. These are surrounded by a layer of phospholipids and apolipoproteins. These are known as **Chylomicrons.** These migrate to the plasma membrane; enter into the lymphatic vessels by exocytosis. The presence of these microns is responsible for giving lymph its milky appearance.

The dietary nucleic acids namely DNA and RNA are denatured by HCl in the stomach. Their digestions are carried out in the small intestine, primarily by the enzymes of pancreatic juice and are converted into oligonucleotides. The nucleotides are either directly absorbed or degraded to free bases before

absorption. Some of the unabsorbed are metabolized by the intestinal bacteria. On absorption they are converted to uric acid by intestinal mucosal cells and excreted in the urine.

Absorption of food commences in the jejunum and ileum. It is not purely by only osmosis but to a large extent a selective action of the epithelium in which action of the underlying leucocytes play a part. The rate of absorption depends upon the rapidity of intestinal circulation, the osmotic tension of the intestinal contents in comparison with blood plasma and the condition of the intestinal absorptive mucosa.

Katu Avasthapaka–

पक्वाशयं तु प्राप्तस्य शोष्यमाणस्य वन्हिना । परिपिण्डितपक्वस्य वायुः स्यात् कटुभावतः ।।(C.S.Ch.15/11)

This is the third and the last phase of digestion. It begins on completion of the second phase. It is observed that the actual breakdown (both physical and chemical) of ingested matter is completed. Hence this phase can also be considered as Pakvavastha.

This phase is mostly dominated with the extensive absorption of water along with the soluble contents leading to the bifurcation of the byproducts (the residue or those parts of the substance that had been unable to be digested) of digestion. After separation, the process of absorption (Shoshana) takes place which is due to the combined action of the remnant activity of Jataraagni along with active involvement of Vayu (Samana Vayu) present in the region. The Shoshana action leads to the formation of faeces and its attainment of solid (Pinda) form. Here as the activity of drying the contents is given more importance, where this activity is mainly believed to be brought about by the Agni and Vayu Mahabhuta. The dominance of the two Mahabhutas is supposed to result in Katu Rasa. Hence this stage of digestion is named as KatuAvasthapaka. The resultant conditions are more favorable for the development and nourishment of Vata Dohsa mainly due to the dominance of Rukshaguna and also KatuBhaava which are believed to have a considerable action on Vata Dosha.

This phase of digestion is considered to be taking place in the region between the levels of ileo-ceacal junction and the anal region where the residue contents of digestion are made ready for evacuation. This region largely comprises of the large intestine.

Due to the slower transmission of the contents in the large intestine, the absorption of food residue mainly the electrolytes along with water takes place thus forming the faeces. The consistency of the faeces depends upon the activity of absorption, activity of excretion and utilization of certain non-digested and unabsorbed foods.

It can be observed that eventhough there is utmost differentiation of the nutrients in the 2nd Avasthapaka, the absorption is also seen in the 3rd Avasthapaka also. These stages of Vipaka is highly observable and can be visualised through the present technology. The next part of Vipaka which is the main one with respect to the science of Dravyaguna is mainly dependent on this stage itself. If any of the stage doesn't function properly, will lead to considerable and relative malfunction in Nishtapaka also. Unlike Avasthapaka, Nishtapaka doesn't produce the three characteristic conditions like Avasthapaka. It will only produce that particular metabolite which is active in interacting with the body or cell components so as to produce the expected effect. Thus, it can be either Madhura, Amla or Katu. Among the three, it is the two namely Madhura and Katu is very commonly observable (analysed through effect).

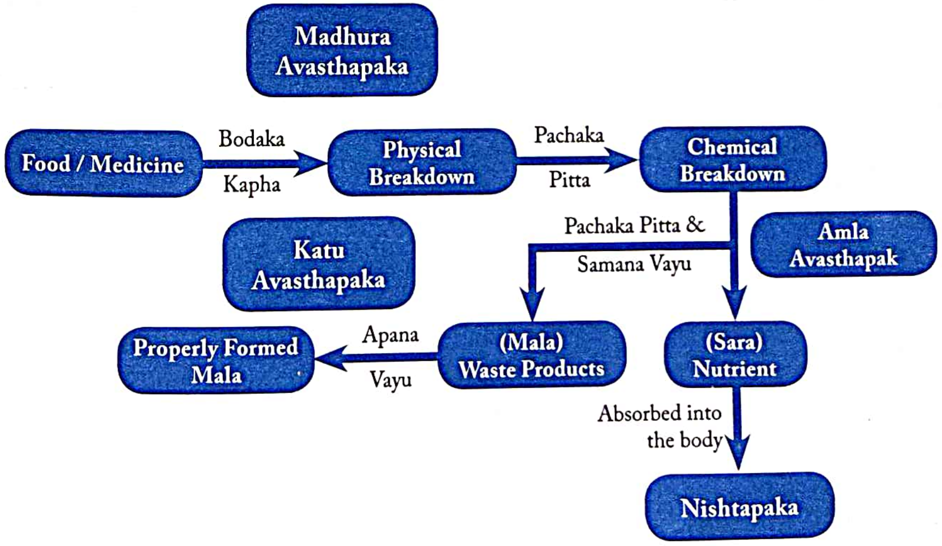


Figure No.3 Stages of Avasthapaka

Nishtapaaka-

नह्यवस्थापाकोऽयं रसस्वभावं निष्ठपाकं बाधते। (Chakrapani Commentary on C.S.Ch.15/9)

परं जातो विपाकानां लक्षणं संप्रवक्ष्यते। कटुतिक्तकषायाणां विपाकः प्रायशः कटुः ।।

अम्लोऽम्लं पच्यते स्वादुर्मधुर लवणस्तथा। (C.S.Su.26/57-58)

द्रव्येषु पच्यमानेषु येष्वम्बुपृथिवीगुणाः। निर्वतन्तेऽधिकास्तत्र पाको मधुरो उच्यते ।।

तेजोऽनिलाकाशगुणाः पच्यमानेषु येषु तु। निर्वर्तन्तेऽधिकास्तत्र पाकः कटुकोच्यते ।। (S.S.Su.40/10-12)

Various components of the substances that had been ingested are rather used for different uses and procedures in the body. Initially, they are present in the form of complex structures that are of heterogeneous manner which are broken down into simpler ones by subjecting them to the process of digestion. It involves various organs that play different roles so as to bring about the required changes. Thus, making it suitable for absorption, such that further metabolism is possible and assimilation is done to nourish the tissues and organs present in various parts of the body. The nourishment may be in the form of production of various tissues, parts of cell and also formation or release of energy such that the life activity is maintained and continued.

The transformation is resulted by virtue of hundreds of reactions that take place simultaneously in a living cell, involving more than 2000 enzymes, in a well organized and integrated manner. The entire spectrum of reactions, occurring in the living system after the absorption of the essential nutrients from the G.I.T. that are collectively referred as Vipaka or Nishtapakakriya or metabolism. It is this Vipaka that the subject of Dravyaguna mentions it as a resultant of the property present in the substance. Among the various components of the ingested substance, the macronutrients namely the Carbohydrate is a rich source of energy that are instant and ready for use to the body activities. The fats are the ones that are used for reserving the energy in the body so as to be of use during dire necessity of energy. Finally, the proteins are the ones that are used for the growth and repair of the body parts.

Metabolic pathway constitutes a series of enzymatic reactions to produce specific products. These specific products thus produced are either a substrate of the reaction (Poshaka dhatu) or an intermediate product (adhya dhatu) known as a **metabolite**. A **metabolic pathway** also can be considered as a type of srotas. The metabolite is undoubtedly resulted as a consequence of the process of metabolism. The tendency of the substance to undergo a specific metabolism process is due to the property present in the substance. This property is considered as Vipaka of the substance.

Metabolism can be broadly classified into two categories namely –

1. Catabolism – The degradation process concerned with the breakdown of complex molecules to simpler ones, with a concomitant release of energy.
2. Anabolism – The biosynthetic reactions involving the formation of complex molecules from simple precursors.

A clear demarcation between catabolism and anabolism is rather difficult, since there are several intermediates common to both the processes.

Catabolism-

Catabolic reaction is defined as the reactions that breakdown large molecules into small ones that results in the release of energy. Digestion is also a type of catabolism which is having both chemical and physical breakdown. Here it breaks the biomolecules into energy which is used by the anabolic process for reconstruction and gives out CO2 and water as waste. The very purpose of catabolism is to trap the energy of the biomolecules in the form of ATP and to generate the substance (precursors) required for the synthesis of complex molecules. It occurs in 3 stages:

1. Conversion of complex molecules into their building blocks.
2. Formation of simple intermediates which are not readily identifiable as carbohydrates, lipids or proteins.
3. Final oxidation of acetyl CoA releasing large quantity of energy as ATP.

Anabolism-

Anabolism is defined as the process through which the smaller units of nutrients are bound together to make bigger structures that form the biomolecules or biomass. The process involves the synthesis of a large variety of complex molecules, the starting materials are relatively few along with the release of heat. Besides the availability of precursors, the anabolic reactions are dependent on the energy supply in the form of ATP or GTP and reducing equivalents. The energy is supplied by the catabolism activity which supplies around 40% of the energy requirement.

The anabolic and catabolic pathways are not reversible and operate independently. The implications of the two sets of metabolism or pathways are

rather similar to the two types of Vipaka namely Guru and LaghuVipaaka. As such, the metabolic pathways occur in specific cellular locations and are controlled by different regulatory signals. In certain cases, the condition of catabolism doesn't give energy like fat digestion where the direct phosphate molecule of energy is not obtained.

5.2. Vipaka Karma on Dosha, Dhatu and Mala

The property Vipaka is the one that is always understood through the effect that it produces. Every substance that is taken internally and some even externally get absorbed into the body where they interact and exhibit the effects. The action of the components present in the substance are either active or inactive ones. It is these active ingredients in the substance that interact with the body components giving rise to actions that produce certain effects. The inactive ingredients are usually excreted out as waste in the form of end metabolites through urine or stools.

The components of the body are three namely Dosha, Dhatu and Mala and the activity is all revolving around these three set of components itself. Thus, the understanding the effect of Vipaka property on these three set of components is very essential for its application.

Trividha Vipaka

मधुरो लवणाम्लौ च स्निग्धभावात्रयो रसः । वातमूत्रपुरीषाणां प्रायो मोक्षो सुखा मताः ।
कटुतिक्तकषायास्तु रूक्षभावात्रयो रसाः । दुःखाय मोक्षे दृश्यन्ते वातविण्मूत्र रेतसाम् ।।
शुक्रहा बद्धविण्मूत्रो विपाको वातलः कटुः । मधुरः सृष्ट विण्मूत्रो विपाकः कफशुक्रलः ।।
पित्तकृत् सृष्टविण्मूत्रः पाकोऽम्लः शुक्रनाशनः । तेषां गुरुः स्यान्मधुरः कटुकाम्लावतोऽन्यथा ।।

(C.S.Su.26/59-62)

The effect of the three types of Vipaka on the body components are explained in terms of the effect on individual Dosha that gets triggered, Shukra Dhatu to represent the whole set of Dhatu and Mutra along with Pureesha from the Mala category. Here, it is to be noted that the Dosha that gets nourished is usually during the Avasthapaka stage while the other two after the Nishtapaka stage. The Shukra is the last Dhatu to be nourished in the sequence of Dhatu which implies that if Shukra Dhatu is affected then, the others too are equally effected. The overall view of the effect on the three components are as below:

Vipaka	Guna	Dosha	Dhatu	Mala
Madhura	Snigdha and Guru	Increase Kapha	Shukra Vardhaka	Srishta Vitmutra
Amla	Snigdha and Laghu	Increase Pitta	Shukra Nashaka	Srishta Vitmutra
Katu	Ruksha and Laghu	Increase Vata	Shukra Nashaka	Baddha Vitmutra

The substances considered under Madhura Vipaka is generally the ones that are dominated by the Prithvi and Jala Mahabhuta. Thus the Vipaka generally has the effect similar to that of Snigdha and Guru Guna resulting in the incremental effect of the Kapha Dosha. Similarly, due to the reason that majority of the body tissues or Dhatu is dominated by the Prithvi and Jala Mahabhuta, the one that has Madhura Vipaka will be increasing their quantity and quality considerably which is denoted by the Shukravardhaka effect. This means that a substance that results in a Madhura Vipaka will build the the tissues, allow it to grow and repair. It will also store the energy for future use of the body whenever needed thus making the body strong, bulkier with increased stamina and capacity of the body to survive for longer duration with stability. Thus they will be available even to nourish the last Dhatu namely the Shukra Dhatu in the body. These substances will result in more of Anabolism than Catabolism when they reach the phase of Nishtapaka (Metabolism).

For example Ksheera which is described to have the properties namely Madhura Rasa; Guru, Snigdha Guna; Sheeta Veerya and Madhura Vipaka. The substance is very well known for its Brimhana or nutritive aspects too.

Similarly a substance that results in an Amla Vipaka will undoubtedly increase the energy levels as the substances that undergo Madhura Vipaka. But comparatively they have lesser amount of nourishment. Hence they fail to reach the last Dhatu or tissue of the body. But as it has the capacity to increase the energy levels instantly which is usable to provide nourishment to certain Dhatu especially the Rakta Dhatu. Thus, the substances with this Vipaka is having the effect of Hridya as a major effect. Amla Vipaka thus helps in nourishment of certain components that are associated with Pitta Dosha namely the Rakta Dhatu. Hence, it has the capacity to provide the protection to the body (possibly as immune modulators) but doesn't have the capacity to enhance growth and

repair of body tissues. This dual nature of Amla Vipaka is the main reason for the difference of opinion with respect to the particular Vipaka between the two prominent schools of Ayurveda. Thus we can understand that these substances will result in a balance of both the process of Anabolism and Catabolism.

* For example Changeri which is described to have the properties namely Amla, Kashaya Rasa; Laghu, Ruksha Guna; Ushna Veerya and Amla Vipaka. The substance is very well known for its actions like Deepana or appetizer. This action is one of the type of Catabolism dominated process. It is given in intestinal disorders like Grahani where the optimum use gives the required benefits.

A substance that undergoes a KatuVipaka will clearly increase the energy levels only to the greater extent. Hence, it provides energy to the body tissues but doesn't perform the activity of growth and repair. Still the release of utmost energy is available instantly to carry out the different processes of the body. They further breakdown quickly which gives energy that are used by the body but now basic components that act as the blocks for construction of body parts. The nourishment with respect to growth and repair of body tissues is very less or negligible or remains with respect to a small part of the bodily tissues that have a similar property or nature. As soon as the energy is used up the effect and the residual presence of the substance is over and lost. The residue that is present in less quantity is evacuated and excreted by the body as it becomes useless. Here too the quantity of the waste production is also in very less quantity or less bulkier to initate evacuation. Hence, the resultant effect on Mala is that the quantity is less which is difficult to be excreted. Thus we can understand that these substances will result in more of catabolism than anabolism.

* For example Maricha which is described to have the properties namely Katu Rasa; Teekshna, Ruksha Guna; Ushna Veerya and Katu Vipaka. The substance is very well known for its Deepana or appetizer action. This action is one of the type of Catabolism dominated process.

Dvividha Vipaka

The properties and actions of Dwividha Vipaaka as per Sushruta –

Vipaka	Dosha	Mala
Guru/Madhura	Increase Kapha, reduces Vata and Pitta	Srishta Vit mutra
Laghu/Katu	Increase Vata and Pitta, reduces Kapha	Baddha Vit mutra

The substances that result in Guru Vipaka at the stage of Nishttapaka, will nourish the body tissues slowly spread over an extensive span of time. It is due to the fact that they are very hard for digestion (Nishttapaka), and hence yield nourishment and energy slowly. They provide all the necessary components that are useful in the growth and repair of the body parts thus making it strong, stable and secure. The Guruvipaka is basically resulted due to the influence of Prithvi and Jala Mahabhuta which are responsible to supplement majority of the components in the body. It is also the basic component of Kaphadosha which makes it the cause for the increase. While being oppositely charactered to Vata and Pitta Dosha, the Guruvipaka will reduce the effects of the two. Thus, the substances with this type of Vipaka will result in utmost storage of energy along with the nourishing factors required for the body. In case of those that result in Laghu Vipaka, they exhibit the tendency of quick digestion and liberation of enormous amount of energy which will enhance the activities in the body leading to more of metabolic activity. This increased activity will use the energy released leading to less nourishment and storage. Thus the nourishing factors from this class of substances will be quite less or negligible. As the contributing Mahabhutas are Akasha, Vayu and Agni, this Vipaka will increase Vata and Pitta Dosha while they are opposite to the Kapha Dosha. The substances are quick to get converted into energy leading to less of mass production and low bulk of excretory products. As a result, the substances with Laghuvipaka will result in low out put of Mala (Excreta).

This particular explanation of Guru and LaghuVipaka in fact is in accordance with the concept of Anabolism and Catabolism respectively which is being explained in the science of Ayurveda respectively.

Clinical interpretation of Vipaka

The action of Vipaka is the final outcome or effect that a substance exhibits on the body. Knowledge of this effect is usually not an immediate one but after a certain period of time. Any substance is primarily either digested or is absorbed directly (if present in absorbable form). These absorbed materials then circulate in the blood and goes a series of biochemical changes. These changes are dependent on the composition of the substance and accordingly will give the benefits normally.

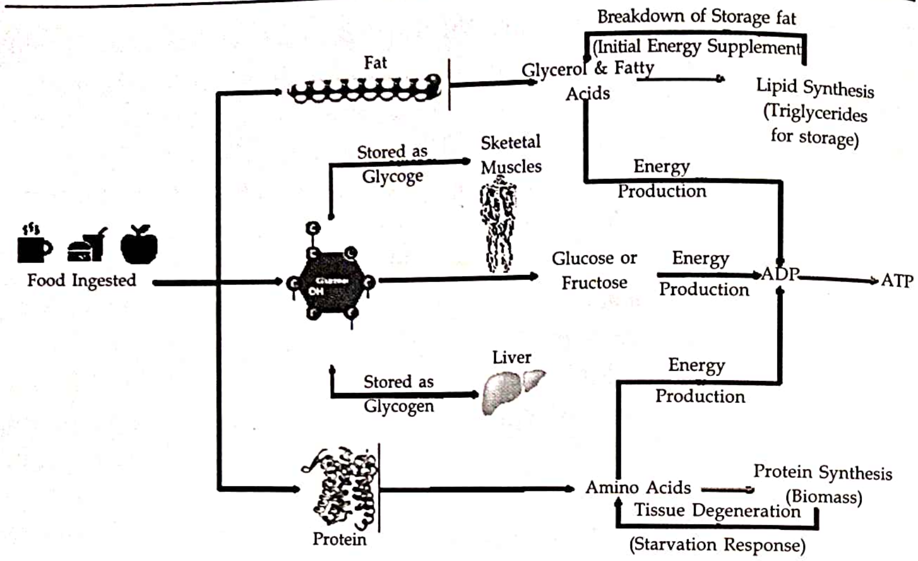


Figure No.4 Stages of transformation that the substance undergoes in the body.

As Vipaka is the final effect of the substance, it is quite evident that the long-term effect of the substance is due to the property Vipaka. The determination of the effect is till the last metabolite is present in the body. The longer its duration present in the body, proportionate will be the effect. Thus, a proper understanding of Vipaka is necessary for knowing the long-term effect of the substance.

Research Updates on Vipaka

There are various studies that are conducted to understand Vipaka and interpret in light of modern experimental knowledge. Some of them are as below:

1. A detailed review on the concept of Vipaka was done by Dr. Akhil Kumar Agarwal et.al., concluded that the understanding of Agni is very much necessary to know the concept of Vipaka. The review also highlighted the understanding of Vipaka in light of the knowledge about pharmacokinetics and bio availability.
2. An experimental evaluation of Vipaka was done on albino rat experimental models by Dr. Anuruchi Jadoun et.al., by using the drugs that have Samana and Vichitra Pratyayarabdha configuration of properties. The assessment in the study was done on the basis of body weight, food consumption, water intake, fresh and dry faecal output and food conversion ratio so as to determine the Vipaka on the basis of textual reference.
3. Another laboratory experimental evaluation of certain drugs for their Vipaka was done through simulation method. In the experimentation, the substance was boiled and an in-vitro simulation of digestion is done. Then the phytochemical analysis of the samples in different stages of the process was assessed to ascertain the Vipaka of the substance. The experiment was conducted by Dr. Dhanashree K Handibag who concluded that the methodology showed that the digestion of Haridra, Shunti and Ardraka displayed the characteristics that are parallel to the textual references.

5.1. Vipakopalabdhi (Determination of Vipaka) & Taratamya (Degree of Variation)

Vipakopalabdhi

........................विपाकः कर्मनिष्ठया । (C.S.Su.26/66)

कर्मणो निष्ठा निष्पत्ति कर्मनिष्ठा कर्मसमाप्तिः । (Chakrapani Commentary on C.S.Su.26/66)

तेन विपाको निश्चीयते एतेन विपाको वित्यपरोक्षः तत्कार्येणानुमीयते । (Chakrapani Commentary on C.S.Su.26/66)

The interaction between the components of the substance within the body is the action that produces a given effect. Here the property of Vipaka is the one that is of the end metabolite. It is that property with which the end metabolite interacts and produces an effect. After the action of the end metabolite, the very existence of the substance and its derivatives are lost either by excreting it out or get assimilated into the body in the form of energy or a macromolecule used to build our body. Thus, the property of Vipaka with respect to the substance is always assessed by analysing the final effect that is exhibited by the end metabolite of the substance. This being an inference derived from the observation of effect, the method of assessment is Anumana Pramana as highlighted by Chakrapani.

Vipakataratamya

It is very well known that the 6 Rasa dravya undergo 3 Vipaka which means that there is variation in the degree of the effect that a Vipaka produces. This variation is basically dependent on the Rasa of the substance and this is known as 'Taratamya of Vipaka'.

विपाकलक्षणस्याल्पमध्यभूयिष्ठतां प्रति । द्रव्याणां गुणवैशेष्यात्तत्र तत्रोपलक्षयेत् ।। (C.S.Su.26/61)

विपाक लक्षणस्याल्पमध्यभूयिष्ठतामुपलक्षयेत्, प्रति प्रति द्रव्याणां गुणवैशेष्यात् हेतोरित्यर्थः । एतेन द्रव्येषु तथा वैशेष्यं मधुरत्वमधुरतरत्वरतमत्वादि, तथा हेतोर्विपाकानामल्पत्वादयो विशेषाभवन्तीत्युक्तं भवन्ति । (Chakrapani Commentary on C.S.Su.26/61)

तेन मधुर रसविपाको मधुरः श्रेष्ठो विण्मूत्रमोक्षो कफशुक्रवृद्धौ च लवणरसविपाको मधुरस्वल्प सृष्टविण्मूत्र कफशुक्रश्चाल्पः अम्लश्च मध्यमसृष्टविण्मूत्रः शुक्रनाशनश्च मध्यमः तिक्तकटुकषायाणां तिक्तरस विपाकः कटुरल्परूपेण शुक्रहा बद्धविण्मूत्रो वातलश्च । कटुरसविपाकः कटुमध्यमरूपेण। कषायरसविपाकः कटुरुत्तमरूपेणेति । इत्येवं द्रव्याणां स्नेहरौक्ष्यादिगुणवैशेष्यादल्पमध्यश्रेष्ठत्वादुपलक्ष्य ब्रूयात् ।। (Gangadhar commentary on C.S.Su.26/61)

यत्र रसेन सदृशो विपाको मधुराम्लकटुकानां द्रव्याणां तत्र प्रधानरससमानगुणानामुत्कृष्टत्वाद्विपाकस्योत्कृष्टत्वं कल्पनीयम् । एवं मध्यत्वान्मध्यत्वम् । स्वल्पत्वाच्च स्वल्पत्वम् । यत्र तु रसाद्विपरीतो विपाको लवणतिक्तकषायाणां तत्र रसविपरीतानां गुणानामुत्कृष्टत्वादुत्कृष्टत्वं कल्पतेद्विपाक सदृशानामित्यर्थः । एवं मध्यत्वमल्पत्वं च ।। (Indu Commentary on A.S.Su.17/16)

The degree of variation in the effect exhibited by Vipaka depends on the other properties that the substance possesses. Here among the three Vipaka, the variation in Amla Vipaka is probably on the intensity of the Amlarasa present in it. It is to be noted, that the commentary of Gangadhar has included the Amla Rasa under Madhura Vipaka itself. But as the other Vipakas are not resultant of the respective Rasa but also due to other Rasa which makes it to have notable variations. Thus, the Vipaka is assessed into three degree of variations namely Alpa, Madhyama and Uttama. The following table gives the details of the variations.

Vipaka	Alpa	Madhyama	Uttama/Shreshta
Madhura	Lavana	Amla	Madhura
Katu	Tikta	Katu	Kashaya

The assessment is done based on the effect that it exhibits in the body with respect to the Dosha, Dhatu and Mala. The details of the effect on the three set of body components are as below:

Vipaka	Rasa	Dosha	Dhatu	Mala
Alpa Madhura	Lavana	Kapha alpavriddhi	Shukra alpavriddhi	Srishtavitmutra
Madhyama Madhura	Amla	Pitta Vriddhi	Shukranasha	Srishtavitmutra
Uttama Madhura	Madhura	Kapha Vriddhi	Shukra Vriddhi	Srishtavitmutra
Alpa Katu	Tikta	Vata Vriddhi	Shukra Vriddhi	Baddhavitmutra
Madhyama Katu	Katu	Vata alpavriddhi	Shukranasha	Baddhavitmutra
Uttama Katu	Kashaya	Vata Vriddhi	Shukranasha	Baddhavitmutra

The variation in the Vipaka is in relation to the Rasa that is present in the substance. Here Indu mentions in the commentary that the substances that have Madhura, Amla or Katu Rasa when they exhibit their respective Vipaka, then such a Vipaka property is said to be the superior. But when the main Rasa of the substances is not similar to that of the Vipaka then it will be taken as an inferior one. Moreover, even if the said Rasas are of Madhyma or Alpa Bala, then the resultant Vipaka will also be Madhyama or Alpa too. Here we observe that there is two basis for differentiation namely –

1. The Rasa which are having Samanaguna (Sama properties)
2. The Rasas that have Utkrishtaguna (A strong influential property)

As per the commentary of Gangadhar, the Guna or property that determines whether the said Rasa is Utkrishta, Madhyama or Alpa is by the assessment of Snigdha and Ruksha guna in the substance.

Rasa	Condition of Guna	Condition of Vipaka
Madhura, Amla & Katu	Samana Guna	Respective Vipaka - Utkrishta
Madhura, Amla & Katu	Madhyama Guna	Respective Vipaka - Madhya
Madhura, Amla & Katu	Swalpa Guna	Respective Vipaka - Swalpa
Lavana, Tikta & Kashaya	Utkrishta Guna	Designated Vipaka - Utkrishta
Lavana, Tikta & Kashaya	Madhyama Guna	Designated Vipaka - Madhya
Lavana, Tikta & Kashaya	Swalpa Guna	Designated Vipaka - Swalpa

5.2. Glossary

To summarize the chapter here are the few important points–

- Vipaka is the property of the substance which is present after the complete transformation of the substance to its end-substrates or metabolites.
- The Vipaka is mentioned classically of either three types (Madhura, Amla and Katu) or two types (Guru and Laghu) as mentioned by Atreya School of thought (Charaka & Vagbhata) and Dhanvantari School of thought (Sushruta) respectively.

The Trividha Vipaka at a glance

Vipaka	Guna	Dosha	Dhatu	Mala
Madhura	Snigdha and Guru	Increase Kapha	Shukra Vardhaka	Srishta Vitmutra
Amla	Snigdha and Laghu	Increase Pitta	Shukra Nashaka	Srishta Vitmutra
Katu	Ruksha and Laghu	Increase Vata	Shukra Nashaka	Baddha Vitmutra

The Dvividha Vipaka at a glance

Vipaka	Dosha	Mala
Guru/Madhura	Increase Kapha, reduces Vata and Pitta	Srishta Vit mutra
Laghu/Katu	Increase Vata and Pitta, reduces Kapha	Baddha Vit mutra

- The variation in Vipaka is brought about by the Rasa present in the substance where Madhura, Amla & Katu Vipaka are having the optimum effect while others have comparatively lower effects.
- Among the various methods of assessment, Anumana or inferential method is employed to assess Vipaka by observing the end effect of the substance.
- Clinically Vipaka plays an important role as it determines the final action of the substance that have long range effects on the body.

5.3. EXERCISE

Long Answers

1. What is Vipaka? Summarize the concept of Trividha Vipaka with suitable examples.
2. What is Trividha Vipaka? Who mentioned it and explain Avasthapaka in detail.
3. Define Vipaka and explain Nishtapaka in detail.
4. Explain the whole process of Vipaka in detail
5. Describe Avasthapaka and Nishtapaka in brief and explain their differences.

Short Answers

1. Explain Madhura Vipaka with relevant explanations
2. Explain Amla Vipaka with relevant explanations

3. Explain Katu Vipaka with relevant explanations
4. Explain Madhura Avasthapaka with relevant explanations
5. Explain Katu Avasthapaka with relevant explanations
6. Explain Amla Avasthapaka with relevant explanations
7. Explain Vipakaupalabdhi in detail
8. Explain Vipakataratamyata in detail

Multiple Choice Questions

1. Vipaka is one among the _______ of Dravya
   a. Panchalaxana b. Rasa
   c. Karma d. None of the above
2. Which property is the one that manifests at the end of metabolism?
   a. Rasa b. Vipaka c. Veerya d. Prabhava
3. Which Dosha is nourished by the Madhura Avasthapaka
   a. Vata b. Pitta c. Kapha d. All the above
4. Which Dosha is nourished by the Amlavipaka (Nishtapaka)?
   a. Kapha Dosha b. Tridosha
   c. Vata Dosha d. Pitta Dosha
5. Which Vipaka is having the effect of Srishta Vitmutra and Shukranasha effect?
   a. Amlavipaka b. Amlaavasthapaka
   c. Madhuravipaka d. Madhuraavasthapaka
6. What is the method for assessing the Vipaka?
   a. Pratyakshapramana b. Anumanapramana
   c. Both d. None
7. Which among the list is the having the utkrishta effect on the body?
   a. Lavana Rasa – Madhura Vipaka
   b. Tikta Rasa – Katu Vipaka
   c. Madhura Rasa – Madhura Vipaka
   d. Kashaya Rasa – Madhura Vipaka
8. Which among the Trividha Vipaka is considered as Laghu Vipaka?
   a. Madhura b. Tikta c. Amla d. Katu
9. What is the effect on Dosha exhibited by Katu Vipaka as per the textual references?
   a. Vata Vriddhi b. Pitta Vriddhi
   c. Vatapitta Vriddhi d. Pittavata Vriddhi

10. What is the parameter to be observed for assessing Vipaka?
    a. Multiple effect
    b. Initial effect
    c. Immediate effect
    d. Final effect

Answer Key

1 a	2 b	3 c	4 d	5 a	6 b	7 c	8 d	9 a	10 d

Bibliography

1. Sharma P. V. (1984). Dravyaguna Vignyana. Varanasi. Chaukhambha Bharati Academy.
2. Agnivesha (1998). Charaka Samhita (Vol 1-2). Redacted by Charaka: Hindi commentary by Kashinatha Shastri, Gorakhanatha Chaturvedi: Rajeshwaradatta Shastri, Yadunandana Upadhaya, Ganga Sahaya Pandeya, Banarasidasa Gupta (eds), Varanasi. Chaukhambha Bharati Academy.
3. Agnivesha (2002). Charaka Samhita (2nd ed., Vol 1-5). Redacted by Charaka: Sanskrit commentary Ayurvedadipika by Chakrapani, Jalpakalpataru by Gangadhar: Sengupta Narendranath, Sengupta Balaichandra (eds), Varanasi. ChaukhambhaOrientalia.
4. Vagbhata (1997). Astanga Sangraha (12th ed.). Hindi commentary Vidyotini by Atrideva Gupta: Yadunandana Upadhyaya (ed.), Varanasi. Chaukhambha Sanskrit Sansthan.
5. Kallianpur Supriya, Gokarn Rohit (2019). A text book of Dravyaguna Vijnana (1st ed., Vol 1-2). Varanasi. Chaukhambha Orientalia.
6. Shastry J.L.N., Nesari M. Tanuja. (2019). A text book of DravyagunaVijnana (Reprint., Vol 1-2). Varanasi. Chaukhambha Orientalia.
7. Sushruta (1997). Sushruta Samhita (11th ed., Vol 1-2). Hindi commentary Ayurveda tattva sandipika by Ambikadutta Shastri, Varanasi. Chaukhambha Sanskrit Sansthan.
8. Acharya, Y.T. (1997). Dravyaguna Vijnanam (7th ed., Vol 1-2). Nagpur. Shree Baidyanath Ayurved Bhavan Limited.
9. Sánchez López de Nava A, Raja A. Physiology, Metabolism. [Updated 2022 Sep 12]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK546690/
10. Patricia JJ, Dhamoon AS. Physiology, Digestion. [Updated 2022 Sep 12]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK544242/
11. Satyanarayana, U. (2013). Biochemistry. Elsevier Health Sciences.
12. Kumar, A. A., Kumar, T. S., Sonal, S., Medha, A., Devika, S., & Nikita, A. (2022). A Review Article On Concept Of Vipaka WSR To Pharmacokinetics. Journal of Pharmaceutical Negative Results, 2031-2034.
13. Anuruchi, Jadoun; Solanki, S K; Ashok, B K; Dwivedi, R R (2012). Global Journal of Research on Medicinal Plants & Indigenous Medicine; Koppa, 1(11), 620-628.
14. Dhanshree K. Handibag, Studies in effect of in-vitro digestion of some of the Dravyas with respect to their Vipaka - A Research Article. J Ayu Int Med Sci. 2023;8(4):29-36.

Chapter No.: 6

Concept of Virya

Dr. Mahesh T. S.

Objectives of the Chapter

1. **Define the Laxanas of Veerya**
2. **Differentiate Guna and Veerya**
3. **Discuss karma of Veerya on Dosha, Dhatu and Mala**
4. **Explain clinical application of Veerya**
5. **Discuss research updates of Veerya**
6. **Discuss Viryopalabdhi**

Topics in the chapter

1. **Difference between Guna and Veerya**
2. **Karmas of Veerya on Dosha, Dhatu & Mala**
3. **Clinical application and Research Updates**
4. **Viryaopalabdhi (Determination of Virya) andunderstanding of Virya with respect to actions of active constituents.**

Introduction

As per Ayurveda, the properties of the substances are 5 in number namely, Rasa, Vipaka, Guna, Veerya and Prabhava. The conceptual development of these 5 properties are based on the effect that the substance produces on its interaction with the body. The five properties are known as Panchapadartha by Bhavamishra in Bhavaprakasha.

द्रव्ये रसो गुणो वीर्यं विपाकः शक्तिरेव च । पदार्थाः पञ्च तिष्ठन्ति स्वं स्वं कुर्वन्ति कर्म च ।। (Bhavaprakasha Purvardha 6/169)

Charaka mentions that any property that has the ability to interact with the body and produce an effect is Veerya.

वीर्यं तु क्रियते येन या क्रिया । न वीर्यं कुरुते किञ्चित् सर्वा वीर्यं कृता क्रिया ।। (C.S.Su. 26/65)

Here the reference is aimed towards the potency of the substance as such which is nothing but the ability of the properties to interact with the body parts. These properties may be belonging to any group namely Rasa, Guna, Veerya, Vipaka and Prabhava. The ability of these properties to interact is actually the potency of the substance. Whereas the property Veerya is a property just like any other properties that have a very notable effect. Here it is the property that is considered to be the indicator of potency with respect to the drug or substances that interact with living organisms. Thus, Veerya is the property present in the substance that have the ability to initiate a given action leading to a particular effect.

But when it is considered as a property of individual existence like the others, it becomes a different one from the above described description. Thus, it is described to be one among the Gurvadi gunas that are highly potentiated in nature and have the ability to produce an action that exhibit a notable effect.

गुर्वाद्या वीर्यमुच्यन्ते शक्तिमन्तोऽन्यथा गुणाः ।। परसामर्थ्यहीनत्वाद्गुणा एवेतरे गुणाः । (A.S.Su.17/36-37)

Thus, it is a different entity having individual influence like the other properties that interact with the body namely Rasa, Guna, Vipaka and Prabhava at certain levels or region. Veerya on the other hand is the property that interacts whenever it comes in contact with body and always goes on to exert its influence further.

Undoubtedly, this property dominates other properties in the substance leading to greater exhibition of the related effects. The whole chapter is divided into 4 topics as mentioned above as per the NCISM syllabus.

1. Difference between Guna and Veerya
2. Karmas of Veerya on Dosha, Dhatu & Mala
3. Clinical application and Research Updates
4. Viryaopalabdhi (Determination of Virya) and understanding of Virya with respect to actions of active constituents.

As per the text Dravyaguna Vijnyana by P V Sharma, the word Veerya is derived from the word 'Veer'. This word means that the one which exerts power or Vikranta. This means that it is a property that is present in the substance that can exert its effect whenever it comes in contact with the body.

वीर् विक्रान्तौ । (D.G V.Vol 1. pg 221.)

वीरयते विक्रान्तः कर्मसमर्थो भवतिऽनेन इति वीर्यं । (D.G V.Vol 1. pg 221)

Y T Acharya in his text has mentioned Veerya as an 'active principle' present in the plants as they are having the ability to produce a particular effect. While the same is considered as Veerya Adhishtana by Acharya P V Sharma.

Definition of Veerya

येन कुर्वन्ति तद् वीर्यं । (C.S.Su.26/13)

The definition emphasizes that any activity performed by the substance is due to the property that has been activated. Here too it is not just the property Veerya that is being emphasized but all those properties that get potentiated and activated leading to the interaction with the body components. This aspect is also supported by Nagarjuna as mentioned in the text Rasavaisheshika Sutra

कर्म लक्षणं वीर्यम् । (Rasavaisheshika Sutra 1/169)

Acharya Vagbhata has also explained Veerya as a property of the substance that potentiates other properties making them to initiate activities and that any activity is result of the potentiating effect of Veerya on the other properties of the substance. This explanation gives a broader and an elaborate idea about Veerya.

वीर्यं द्रव्यस्य तज्ज्ञेयं यद्योगात्क्रियते क्रिया । नावीर्यं कुरुते किञ्चित् सर्वा वीर्यकृता हि सा ।। (A.S.Su.17/12)

The definition of Veerya as per Shivadas Sen is that it is a Shakti or energy that is generated by a cumulative effect of the five Mahabhutas out of which the substance has been formed. If the energy is in line with the other properties, then it is to be named as 'Chintya Shakti' while it is a non-explainable or is a peculiar one, then it is 'Achintya Shakti'. The Chintya Shakti is to be named as Veerya while the Achintya Shakti is to be said as Prabhava.

वीर्यं शक्तिः सा च पृथिव्यादीनां भूतानां यः सारवागस्तदतिशयरूपा बोध्या । सा च द्विविधा चिन्त्याचिन्त्यक्रियाहेतुत्वेन तत्रचिन्त्यक्रियाहेतुर्या द्रव्यरसादीनां स्वस्वकर्मणि स्वभावसिद्धा शक्तिः अचिन्त्यक्रियाहेतुश्च प्रभावापर्याया द्रव्याणां रसाद्याननुरूपकार्यकरणशक्तिः । उक्तं च भूतप्रसादातिशयो द्रव्ये पाके रसे स्थितः । (Rasavaisheshika Sutra 1/169)

6.1. Difference between Guna and Veerya

Logic points for the Conceptualization of Veerya Concept

गुर्वादिष्वेव वीर्याख्या तेनान्वर्थेति वर्ण्यते ।। समग्रगुणसारेषु शक्त्युत्कर्षविवर्तिषु ।
व्यवहाराय मुख्यत्वाद्बहुग्रहणादपि।। (A.H.Su 9/14-15)

Basically, the concept of Veerya is of two varities namely Astavidha Veerya and DwividhaVeerya. The concept of Astavidha Veerya is explained by Acharya Vagbhata with the help of 4 points of logical importance or rationale behind the conceptualization on Veerya. They are

1. Samagraguna Saratva (समग्रगुणसारात्व)– Among the twenty properties, the properties that are named as Veerya (8 or 2) influence more than the others. They also exert their influence in such a way that they can be considered as the essence of all the properties. According to Hemadri, the Gunas (2 or 8) are those which maintain its identity even after the substance comes in contact with the Jataragni or digestion in particular, while other properties like Rasa or Guna (18 or 12), etc loose their identity.

   समग्राश्च ते गुणाश्च तेषु साराः चिरकालावस्थितयो गुर्वादय एव, तथा च जङ्गराग्निसंयोगेनापि न मधुरादिरसवत् स्वभावमेते जहति । सर्तेः 'मृह स्थिरे' इति धञ्चि सारशब्दः । (Hemadri Commentary on A.H.Su.9/14-15)

2. Shaktyutkarsha (शक्त्युत्कर्ष)– The properties that are named as Veerya (8 or 2) are more potent than other properties making it to exert its effect to a recognizable extent. Moreover, these properties doesn't undergo any changes normally even after the substance gets metabolised. According to Hemadri, the properties like the Manda, Sandra, etc and the Rasa or other properties do act at certain levels but their effects are either limited or masked by those which are more powerful. But these properties that are said as Veerya have more power and exhibit their effect relatively longer duration.

   तथाऽन्येभ्यो मन्दसान्द्रादिभ्यो गुणेभ्यो रसादिभ्यो वा गुर्वादयः शक्त्युकर्षविवर्तिनः शक्तेः सामर्थ्यस्योत्कर्षः आधिक्यं विशेषेण वर्तो विवर्तः विशेषेण भवनं शक्त्युत्कर्षस्य विवर्तः स विद्यते येषां त एवम् । (Hemadri commentary on a.h.su. 9/14-15)

3. Vyavaharamukhyatva (व्यवहारमुख्यत्व) – The Veerya (8 or 2) are commonly used in routine activities as they influence the actions and their related effects. As per the opinion of Hemadri, the 8 of the properties enumerated in the Gurvadi guna are used frequently to denote diferent actions. Even though the gurvadi gunas are the resultant of the Panchamahabhuta that even makeup the Rasa, the understanding of the substance is mainly based on the Gurvadi gunas and not the Rasa. Thus, it is Gurvadi guna that is considered under the concept of Guna and not the Rasa. But among the Gurvadi Guna it is the 8 or 2 is considered as Veerya as they are commonly being seen to influence the effects.

   किंच गुर्वादीनां गुणानां व्यवहाराय व्यवहारार्थं मुख्यत्वातन्येभ्यो गुणेभ्यो गुर्वादयः प्रधानभूता इत्यर्थः । तथा च गुर्वादयो गुणा द्रव्ये पृथिव्यादौ रसाश्रयेः । इत्युक्तं न मधुरादयो गुणा इति । तस्माद् गुर्वादीनां गुणानां व्यवहारामुख्यत्वं रसादिभ्यः । (Hemadri Commentary on A.H.Su. 9/14-15)

4. Bahulyatgrahana (बाहल्यतग्रहण)– The presence of these properties are abundantly seen in many substances compared to other properties that are numbered in Gurvadiguna. Moreover, these properties are usually taken into consideration while describing the substances. According to Hemadri, compared to the Rasadi properties, it is Gurvadi properties that have higher range of availability. Even the references from different texts also identify different substances through the gunas. Moreover, the gunas form the basis of describing the various actions on the Vatadi Doshas more frequently than the Rasa and other properties. This shows its wide scope of use and applicability making it to be mainly perceived property.

   बह्वो द्रव्य रसादयो गुर्वादिभिगृहीता भवन्ति । तथा चायुर्वेद शास्त्रेषु रसादिभ्यो गुर्वादीनामग्रे ग्रहणं दृष्टम् । यथा वातादिदोष गुणनिरूपणानां गुर्वादीनां पूर्वं ग्रहणं न रसादीनाम् । ....बहुगुण गणानायां प्रथमग्रहणात्। (Hemadri Commentary on A.H.Su. 9/14-15)

There are two considerations about Veerya namely Dvividha Veerya and Astavidha Veerya. The Dvividha Veerya are 2 in number namely Ushna & Sheeta while the Astavidha Veerya are 8 in number namely Ushna, Sheeta, Guru, Laghu, Snigdha, Mridu, Ruksha and Teekshna. The above logic or rationale for conceptualisation holds good for both the explanations. While, the Dvividha Veerya is further simplification of the concept with the rationale or logic as mentioned below:

1. The Gurvadiguna can be easily grouped into two that is dominant with Agni and Soma.
2. Even the seasons are of two natures namely Adana and Visarga.
3. Even the influence of season is either Ushna and Sheeta.
4. The substances are also either Karana (Fundamental) or Karya (Compound).

Here the duality of the nature is being highlighted by Vagbhata so as to emphasize that the most influencing, commonly used and highly powerful property is Ushna and Sheeta thus concluding it as the two Veerya.

अन्ये तु गुवदीनामग्निपोमात्मकत्वादादानविसर्गविभागेन कालस्योष्णशितात्मकं द्विविधमेवामनन्ति ।।
नानात्मकमपि द्रव्यमग्निपोमौ महाबलौ । व्यक्ताव्यक्तं जगदिव नातिकामति जातुचित् ।।(A.S.Su 17/14-15)

Difference between Guna and Veerya

It is evident that the category of Gunas namely Gurvadi Gunas are the base for the property Veerya. The Veerya even though are named after some specific Gurvadi Guna, they are different from them. The nature of the property to be potentiated enough so that it produces a given effect by initiating an action is Veerya. The mere presence of property doesn't produce an action, it has to get potentiated for it to happen. But when the property has the ability to get potentiated itself and exert its influence without the aid of any other factor is Veerya. It is due to this nature that it will always interact with the body when it comes in contact with like chandana, Maricha, Lanka, etc where just by application, they initiate a process that produce an effect. This effect is the result of one potentiated property or a cumulative effect of several properties with one being a prominent one. As mentioned, if it is Agni related properties dominate then the potentiated property is Ushna while if opposite then it is Sheeta. The effects vary with the degree of potentiated condition and the predominance of the opposite characters. Thus, in rare instances like that of Pippali where the cumulative predominance of both the opposites will make it a buffer condition which is called as 'Anushnasheeta'. It is to be observed here that the Mahabhuta configuration of the substance in different stages of metabolism or interactions vary from one to another side of opposites.

To summarize the difference between the Guna and Veerya, the tabulated presentation is given below:

GUNA	VEERYA
20 in number	2 or 8 in number
Generated by individual Mahabhuta	Cumulative effect of the Mahabhuta
Influential under given condition	Highly influential
May produce an effect	Will produce an effect either mild or severe

Table No. 1 Difference between Guna and Veerya

6.2. Karmas of Veerya on Dosha, Dhatu and Mala

The Veerya even though are said to be two types of grouping namely Astavidha and Dvividha Veerya. But the Dvividha is infact the simplified form of Astavidha Veerya itself based on the logic as described above. Hence, in Astavidha Veerya there is Dwividha Veerya also. The Astavidha Veerya are Ushna, Sheeta, Guru, Laghu, Snigdha, Mridu, Ruksha and Teekshna while the Dvividha Veerya are Sheeta and Ushna.

मृदु तीक्ष्ण गुरु लघु स्निग्ध रूक्षोष्ण शीतलम् । वीर्यमष्टविधं.............. ।। (C.S.Su.26/64)

केचिदष्टविधमाहुः – शीतमुष्णंस्निग्धंरूक्षंविशदंपिच्छिलंमृदुतीक्ष्णं चेति । (S.S.Su.40/5)

वीर्यं तु केचित् गुरु लघु स्निग्ध रूक्ष तीक्ष्ण मन्द शीतोष्ण भेदनाष्टविधमाहुः । (A.S.Su.17/12)

वीर्यं पुनर्वदन्त्येके गुरु स्निग्धं हिमं मृदु । लघु रूक्षोष्णं तीक्ष्णं च तदेवं मतमष्टधा ।। (A.H.Su.9/12-13)

The 8 Veerya when enumerated had slight changes in the composition where Sushruta considered Vishada and Picchila in place of Guru and Laghu while Vagbhata considered Manda instead of Mridu in Astanga Sangraha. The consideration of Vishada and Picchila instead of Guru and Laghu because Sushruta mentions it under the context of Vipaka based on the time taken for digestion.

The comparative enumeration of the Astavidha veerya is as illustrated in the table below:

Charaka Samhita	Sushruta Samhita	Astanga Sangraha	Astanga Hridaya
Mridu	Mridu	-	Mridu
Teekshna	Teekshna	Teekshna	Teekshna
Guru	-	Guru	Guru
Laghu	-	Laghu	Laghu
Snigdha	Snigdha	Snigdha	Snigdha
Ruksha	Ruksha	Ruksha	Ruksha
Ushna	Ushna	Ushna	Ushna
Sheeta	Sheeta	Sheeta	Sheeta
-	Vishada	-	-
-	Pichhila	-	-
-	-	Manda	-

On the aspect of Dvividhan Veerya all the scholars of Ayurveda have a clear and decisive opinion as USHNA and SHEETA veerya. But as it comes within the list of Astavidha Veerya, the description of karma on dosha, dhatu and mala with respect to Dvividhaveerya will be included in Astavidhaveerya description itself. Even though there are only 8 Veerya mentioned, the total is reaching to 11 when due consideration is given to all the opinions. The details of the same are as below:

Mridu Veerya (soft)

The veerya which will transmit the quality of softness to the part that it undergoes interaction. It is also useful in the process of clearing/calming (Prasadana) especially of Rakta and Mamsa Dhatu.

मृदो रक्तमांसप्रसादनसुस्पर्शनानि । (Haranachandra Commentary on S.S.Su.41/11)

मृदु .... पित्तघ्नाः । (S.S.Su.41/15)

The action of Mridu Veerya can be elicited in the following manner:

a. Commonly known name – Soft
b. Panchamahabhuta Composition – Jala and Akasha Mahabhuta.

तोयाकाशगुणभूयिष्ठं मृदुत्वं । (S.S.Su.41/15)

c. General action or Karma – Makes the body parts soft to touch (Susparsha).
d. Action on Dosha – Pittahara.
e. Action on Dhatu – Results in clearing or calming (Prasadana) of Rakta and Mamsa Dhatu.
f. Action on Mala – As it smooths the surfaces and makes it soft along with that softening effect on Mala as well. Hence, the substances with this Veerya will facilitate easy evacuation of Mala.

Teekshnaveerya (Penetrating)

The veerya which will facilitate the penetrating of the substance into deeper parts of the body whenever the substance interacts with it. It helps in the processes like acquisition (Sangrahana), suction (Achushana), open or burst (Avadarana) and streaming or discharging (Sravana).

तीक्ष्णस्य संग्रहाचूषणावदारण स्रावणानि । (Haranachandra Commentary on S.S.Su.41/11)

तीक्ष्ण .... श्लेष्मघ्नाः । (S.S.Su.41/15)

The action of Teekshna Veerya can be elicited in the following manner:

a. Commonly known name – Sharp and penetrting
b. Panchamahabhuta Composition – Agni Mahabhuta.

तीक्ष्ण........अग्नौ । (S.S.Su.41/15)

c. General action or Karma – Highly penetrative and enters the body immediately on contact.
d. Action on Dosha – Pittakara.
e. Action on Dhatu – Penetrates into the Dhatu and makes it to be open leading to precipitation which may lead to weakening of the Dhatu.

f. Action on Mala – The Teekshna result in the deep penetration of the substance and quicker activity. Moreover, it also leads to precipitation in the Dhatus too leading to increase in the Mala formation along with easy excretion.

Guru Veerya (Heavy)

The veerya that transmits the quality of turbidity or opaque (Sandra) to the area that it interacts is the Guru Veerya. It is also provides effect like smearing (Upalepa) and utmost nourishment (Prinana). The property is also attributed with the effect of increasing the bulkiness of body (Brimhana).

सान्द्रोपलेपकफकृद्गुरुः प्रीणनबृंहणः । (Haranachandra Commentary on S.S.Su.46/518)

......गुरु पित्तनाशनं बल्यम् । (Dravyaguna Sangraha 8)

The action of Guru Veerya can be elicited in the following manner:

a. Commonly known name – Heavy
b. Panchamahabhuta Composition – Jala and Prithvi Mahabhuta.
c. General action or Karma – It has the ability to increase bulkiness of body (Brimhana), provide adequate nourishment and also cover or smearing of layer (Upalepa).
d. Action on Dosha – Vatahara, Pittahara and Kaphakara.
e. Action on Dhatu – Increase the bulk of the Dhatus in general, makes it more massive and also provides a layer or covering over them (Upalepa).
f. Action on Mala – The veerya is attributed with the increase in the bulk or quantity of Mala and as it has the ability to smear itself, the Mala have a layer that help them to be easily evacuated.

Laghu Veerya (Light)

The veerya which will transmit the quality of lightness and brings down the weight of the individual is known as Laghu Veerya. It basically performs sliming or depletion of body tissues (Lekhana) as the substances give less nourishment. It also facilitates the action of healing (Ropana) in the region which it interacts. Moreover it is said that the one to cause infertility or loss of fertility (Avrushya).

लघुस्तद्विपरीतः स्याल्लेखनो रोपणस्तथा । (S.S.Su.46/525)

........लघ्ववृष्यं च । (Dravyaguna Sangraha 8)

The action of Laghu Veerya can be elicited in the following manner:

a. Commonly known name – Light

b. Panchamahabhuta Composition – Akasha, Vayu & Agni Mahabhuta; Mainly Akasha Mahabhuta.

अग्निवायू हि लघुत्वाच्च तान्यूर्ध्वमुत्तिष्ठन्तिः । (S.S.Su. 41/10)

c. General action or Karma – The veerya is mainly useful for Slimming or depleting purpose (Lekhana), for instant energy as in case of disease condition (Pathya) because it facilitates easy metabolism and facilitates healing (Ropana) activity in the body.

d. Action on Dosha – Kaphahara and Vatakara.

e. Action on Dhatu – Decrease of almost all the Dhatus but more specifically the Shukra Dhatu, hence it leads to infertility (Avrushya).

f. Action on Mala – On Mala the veerya will decrease its bulk and hence will make it difficult for excretion. This in turn leads to constipation and its related conditions too.

Snigdha Veerya (Unctous)

The veerya which will transmit the quality of moisture to the part that it undergoes interaction. It is also useful in the process of nourishing (Santarpana), increase of bulk (Brimhana), Aphrodisiac (Vajeekarana) and Life protective (Vayasthapana).

स्निग्धस्य स्नेहनवृंहणसन्तर्पणवाजीकरणवयःस्थापनानि । (Haranachandra Commentary on S.S. Su.41/11)

.......स्निग्धौवातघ्नौ । (S.S.Su.41/15)

The action of Snigdha Veerya can be elicited in the following manner:

g. Commonly known name – Unctous

h. Panchamahabhuta Composition – Jala and Prithvi Mahabhuta.

पृथिव्यम्बुगुणभूयिष्ठःस्नेहः । (S.S.Su.41/15)

i. General action or Karma – Supports life (Vayasthapana) and helps in increase of nourishment (Santarpana) and even the bulkiness of the body (Brimhana).

j. Action on Dosha – Vatahara.

k. Action on Dhatu – Increase of almost all the Dhatus but more specifically the Shukra Dhatu, hence is said to produce Vajeekarana (Aphrodisiac) action.

l. Action on Mala – The veerya is attributed with the ability to increase bulk and also providing unctousness of the body part with which it gets associated. Thus, it increases bulkiness of Mala and also lubricates the parts so as to facilitate easy excretion.

Ruksha Veerya (Dry)

The property that transmits the quality of dryness by absorption of moisture at the part of the body that interacts with the substance is known as Ruksha Veerya. It is also useful in the process of drying (Virukshana), collection (Sangrahana) and squeezing or constricting (Peedana) too.

रूक्षस्य अनिलवृद्धिसंग्रहणपीडनविरूक्षणोपरोहणानि । (Haranachandra Commentary on S.S. Su.41/11)

रूक्षः .... श्लेष्मघ्नाः। (S.S.Su.41/15)

The action of Ruksha Veerya can be elicited in the following manner:

a. Commonly known name – Dry

b. Panchamahabhuta Composition –Vayu Mahabhuta.

वायुगुणभूयिष्ठं रौक्ष्यं । (S.S.Su.41/15)

c. General action or Karma – Makes the body parts dry or devoid of moisture (Virukshana).

d. Action on Dosha – Kaphahara.

e. Action on Dhatu – Results in dryness (Virukshana) by removal of moisture (Kleda), collection or blocking of contents (Sangrahi/Sangrahana) and also constriction or Squeezing (Peedana) in the Dhatu level.

f. Action on Mala – As it absorbs moisture, the substances will cause dryness of Mala and even the surface of the channels leading to difficulty in evacuation and hardening of the Mala.

Ushna Veerya (Hot)

The property that attributes heat to the part of the body or substance that it interacts is known as Ushna veerya. As it is one of the prime property that regulates the energy movement, it has multiple actions like burning (Dahana), metabolizing (Pachana), etc. This is considered the prime property under Veerya as it is included in Astavidha Veerya and also in Dvividha Veerya too.

उष्णस्य दहनपाचनमूर्छनसस्वेदनवमनविरेचनानि । (Haranachandra Commentary on S.S.Su.41/11)

तत्रोष्णं दहनपचनस्वेदनविलयनानिलकफशमनानि करोति । (A.S.Su.17/16)

तत्रोष्णं भ्रमतृड्ग्लानिस्वेददाहाशुपाकिताः । शमं च वातकफयो करोति । (A.H.Su.9/18-19)

उष्ण .... वातघ्नौ । (S.S.Su.41/15)

The action of Ushna Veerya can be elicited in the following manner:

a. Commonly known name – Hot or high temperature

b. Panchamahabhuta Composition – Agni Mahabhuta.

....उष्णावाग्नेयौ । s.s.su.41/15

c. General action or Karma – Instrumental in the manifestation of Vamana (Emesis) and Virechana (Purgation) process that may be either therapeutic or pathologic. It will also result in unconscious state (Murchana) when exposed in excess too

d. Action on Dosha – Pittakara, Kaphavilayana and Vatahara

e. Action on Dhatu – Increase metabolism (Pachana), precipitation (Swedana) and burning (Dahana) in the Dhatus.

f. Action on Mala – Due to the increase in metabolism, precipitation, the substances are properly digested normally, it may also result in charring that can be the cause for Vidagdajeerna. Hence normally proper evacuation of the mala is seen but can be resulting in improper evacuation of Mala also when in excess.

Sheeta Veerya (Cold)

The property that leads to absorption of temperature leading to coldness or loss of temperature in the part that interacts with the substance is Sheeta Veerya. It provides a sense of pleasure (prahladana), blockage of channels (Abhishyandana) immobilization (Sthirikarana), clearing or calming (Prasadana), increase moisture or water retention (Kledana) and support life (Jeevana) as effects of action. This is considered the prime property under Veerya as it is included in Astavidha Veerya and also in Dvividha Veerya too.

शीतस्य प्रह्लादनविष्यन्दनस्थिरीकरणप्रसादनक्लेदनजीवनानि । (Haranachandra Commentary on S.S.Su.41/11)

शीतं ह्लादनस्तम्भनजीवनरक्तपित्तप्रसादनादीनि । (A.S.Su. 17/16)

शीतं लक्षयति शिशिरमित्यादि । (Hemadri Commentary on A.H.Su.9/19)

ह्लादनंजीवनंस्तम्भं प्रसादं रक्तपित्तयोः । (A.H.Su.9/19)

शीत .... पित्तघ्नाः । (S.S.Su.41/15)

The action of Sheeta Veerya can be elicited in the following manner:

a. Commonly known name – Cold

b. Panchamahabhuta Composition – Jala Mahabhuta.

शीत.......अम्वुगुणभूयिष्ठौ । (S.S.Su.41/15)

c. General action or Karma – Gives a sensation of pleasure (Prahladana) and supports life (Jeevana).

d. Action on Dosha – Pittahara.

e. Action on Dhatu – Results in clearing or calming (Prasadana), blocks the channels (Abhishyanda), further leads to immobilization (Sthirikarana) and also increase kleda (moisture) or water retention among the Dhatu or within them.

f. Action on Mala – The effect on Mala is that it increases moisture but may also be resulting in making the Mala sticky leading to Abhishyanda or even constipation.

Vishada Veerya (Clear)

The Vishada Veerya is that property that absorbs the moisture (Kledachushana) and leading to drying or clearing of the surface or area. It is also useful in the process of healing (Uparohana) too due to the ability to remove moisture.

विशदस्य क्लेदाचूषणविरूक्षोपरोहणानि । (Haranachandra Commentary on S.S.Su.41/11)

विशदः श्लेष्मघ्नाः । (S.S.Su.41/15)

The action of Vishada Veerya can be elicited in the following manner:

a. Commonly known name – Clear

b. Panchamahabhuta Composition – Prithvi and Vayu Mahabhuta.

क्षितिसमीरणगुण भूयिष्ठं वैशद्यं । (S.S.Su.41/15)

c. General action or Karma – Makes the surfaces clear by absorption of moisture.

d. Action on Dosha – Kaphahara.

e. Action on Dhatu – Removes excess moisture, clears and helps in healing the Dhatus.

f. Action on Mala – The effect of the Veerya on Mala can be assumed that it helps in easy evacuation of the mala as it clears the pathway. Over effect may also lead to roughening of surface leading to sticking of the same on the surfaces.

Picchila Veerya (Slimy)

The Picchila veerya is that property which will result in stickiness of the substance to the part that it interacts. It exhibits actions like smearing (Upalepa), filling (Purana), nourishment (Brimhana), binding two or more surfaces (Samsleshana) and Aphrodisiac (Vajeekarana).

पिच्छिलस्य उपलेपनपूरणबृहणसंश्लेषणवाजीकरणानि । (Haranachandra Commentary on S.S. Su.41/11)

पिच्छिलाः पित्तघ्नाः । (S.S.Su.41/15)

The action of Picchila Veerya can be elicited in the following manner:

a. Commonly known name – Slimy/sticky
b. Panchamahabhuta Composition – Jala Mahabhuta.

पिच्छिलावम्बुगुणभूयिष्ठौ । (S.S.Su.41/15)

c. General action or Karma – Creates a layer over the surface (Upalepa), binding two or more surface or components (Samsleshana) and even provides general nourishment (Brimhana).
d. Action on Dosha – Pittahara.
e. Action on Dhatu – the property results in the nourishment including the Shukra (the last Dhatu). This will give the aphrodisiac (Vajeekarana) effect. The property is also useful in binding of all the Dhatu making it strong.
f. Action on Mala – As it provides enough moisture along with the binding effect, the Mala will be increased in bulkiness and easily evacuated. But its excess may lead to increased stickiness of the Mala resulting in blocking of the channels or Srotorodha.

Manda Veerya (Sluggish)

The property is only mentioned by Vagbhata instead of Mridu. The veerya will be the one that makes all the activities slower or sluggish in intensity.

मन्दः सकलकार्येषु शिथिलोऽल्पोऽपि जायते । (Bhavaprakasha Purvardha 6/211)

The action of Manda Veerya can be elicited in the following manner:

a. Commonly known name – Dull or Sluggish
b. Panchamahabhuta Composition – Jala and Prithvi Mahabhuta.

धरणीसलिलवृत्तिः। (A.D.3/2/24)

c. General action or Karma – Basically reduces the intensity of all activities in the body.
d. Action on Dosha – Vatahara, Kaphakara.
e. Action on Dhatu – The action on Dhatu is that it will reduce the intensity of metabolism thereby slowing the production of Dhatu in general.
f. Action on Mala – Owing to the slowing of activity, the formation of Mala will also be affected that may lead to constipation (malabaddhata).

6.3. Clinical Application and Research Updates

The property veerya is the basis of drug action while rasa is the basis for the action of food.

यवागूसाधनद्रव्यं तावद्विविधं वीर्यप्रधानमौषधद्रव्यं तथा रसप्रधानमाहारद्रव्यञ्च । तत्रौषधद्रव्यं त्रिविधं वीर्यभेदात् । तीक्ष्णवीर्यं यथा शुण्ठ्यादि, मध्यवीर्यं बिल्वाग्निमन्थादि, मृदुवीर्य्यञ्चामलकादि । (Chakrapani Commentary on C.S.Su.2/8)

The substances based on their use is basically of 2 types namely medicine (aushadha) and food (aahara). The medicines are again subdivided into 3 types based on the intensity of potency (veerya) namely high potency (teekshna veerya) like shunti, etc; medium potency (madhyama veerya) like bilva, agnimantha, etc and mild potency (mridu veerya) like amalaki, etc. Here the word veerya refers to the general potentiated property of the substance and not just the veerya property. Similarly the word rasa also refers to aahara rasa or nutrition and not the property rasa as such.

The potentiated properties also include veerya which are necessary for the medicinal action. Depending on the intensity of the potentiated properties, its dose is to be decided. Accordingly, Chakrapani mentions 12g (1 karsha), 25g (1/2 Pala) and 50gm (1 Pala) is the maximum dose per day that can be given with respect to the Teekshna, Madhyama and Mridu veerya medications respectively.

इत्यत्र तीक्ष्णानां कर्षः मध्यानामर्द्धपलं मृद्नां पलमित्युत्सर्गः । (Chakrapani Commentary on C.S. Su.2/8)

Thus it is clearly evident that the veerya of the substance is the basis for proper dosing of the medicament either in the formulation or when using as a single drug in the therapies.

Clinical Application of Veerya

येन कुर्वन्ति तद्वीर्यं । (C.S.Su.26/13)

Basically veerya is the base of every activity that a substance performs. Hence, it is quite evident that understanding the properties that are potentiated enough to produce an effect is very much necessary to have a well desired effect of the treatment.

वीर्य संज्ञा गुणा येऽष्टौ तेऽपि द्रव्याश्रयाः स्मृताः ।
रसेषु न भवन्त्येते निर्गुणास्तु गुणाः स्मृताः । (S.S.Su.41/20)

The veerya that is being mentioned for any substance cannot be a part of rasa or any other guna because a guna or a property cannot be within another property which is specified in the definition of guna itself. Hence, veerya is a separate entity on its own which has its own way of manifestation and expression. Here it may or may not support the action of the other properties present in the substance while initiating an action.

Moreover, there is no chance of any metabolic activity without an interaction (Paka) which is only initiated or manifested through the involvement of potentcy (Veerya). But veerya is again is not possible to perform its function without the ability of the substance to get dissolved and form a solution (Rasa). But all these abilities and properties are sheltered in the substance (Dravya) itself making it to be the important media for the purpose of treatment.

Clinically it is important to understand that the property veerya supersedes the effect of Rasa wherein a substance with Madhura, Amla or Lavana rasa should be Vatashamaka by nature which doesn't happen when there is the presence of Ruksha, Laghu or Sheeta veerya. Similarly, a substance with Madhura, Tikta or Kashaya rasa would be Pittashamaka by nature which too doesn't happen when there is the presence of Teekshna, Ushna or Laghu veerya. Even in case of Kaphashamana too which is possible by Kashaya, Tikta or Katu rasa naturally will not happen when there is presence of Snigdha, Guru or Sheeta veerya. Thus, it is important to understand the veerya of the substance and its relative implications when planning for its use.

ये रसो वातशमना भवन्ति यदि तेषु वै । रौक्ष्यलाघवशैत्यानि न ते हन्युः समीरणम् ।।
ये रसो पित्तशमना भवन्ति यदि तेषु वै । तैक्ष्ण्यौष्ण्य लघुताश्चैव न ते तत्कर्मकारिणः ।।
ये रसो श्लेष्मशमना भवन्ति यदि तेषु वै । स्नेहगौरवशैत्यानि न ते तत्कर्मकारिणः ।। (S.S.Su.40/6-9)

Research Update of Veerya

There are various studies that are conducted to understand veerya and interpret in light of modern experimental knowledge. Some of them are as below:

1. Endothermic reaction for veerya analysis of Patranga (Caesalpinia sappan Linn) – An experimental study was done by Dr. Subrahmanya Bhat et.al., showed that it reduced the temperature to a small extent showing the ability to absorb temperature from the surroundings by the substance which has Sheetaveerya.
2. Exothermic Reaction for Veerya Analysis of Atasi Seeds (*Linum usitatissimum* Linn.) was done by Dr. Arun Kumar Gupta et.al., which showed that the seeds of Atasi increased the temperature of water to a small extent (1-2 deg. f). Thus, it shows the ability to release temperature to the surroundings by the substance which has Ushnaveerya.
3. Evaluation of seasonal variation in veerya of vishadravya Kuchala was done by Dr. Mrunal A Tiwari et.al., where the veerya referred to its general potency. Here the variation in the toxicity of the Kupeelu (Kuchala) was tested and not its sheeta and ushnaveerya. The study showed that there is a marked variations in the toxic content of the substance. The study also shows that the veerya of the substance will vary with the season which may

6.4. Veeryaopalabdhi (Determination of Veerya) and Understanding of Veerya with Respect to Actions of Active Constituents

The veeryopalabdhi or determination of Veerya is the methodology through which it is understood. The classical texts have given a clear methodology of assessment to Veerya. According to Charaka, the method to understand Veerya is through Pratyaksha (Direct cognition) and Anumana (Inference).

वीर्यं यावदधीवासान्निपाताच्चोपलभ्यते ।। (C.S.Su.26/66)

The veerya is basically understood by the action that the substance performs leading to a particular effect which gets exhibited. This exhibition of effect can be an immediately seen when we touch to kept in mouth. As this is can be evaluated directly by our senses, the said understanding is known as Pratyaksha or Nipata (Direct cognition). But the action of the veerya is not restricted to just the initial instance but till the existence of the substance in the body. Hence, its effect is also exerted on the body during its metabolism (Vipaka) too. Thus, the continuous effect of the substance will also give us an idea of the property that is responsible for it. Hence, the property Veerya can be known by the process of Anumana or Adhivasa (Inference) too. Here the word Adhivasa means pertinacity or sticking with something in any given condition.

Vagbhata also mentions that Astavidha veerya is to be taken as both theoretical and practically understandable.

यैरष्टविधं तैरपि चैवमतिप्रकृष्टसक्तियुक्तानामशेषौषधगुणसारभूतानामष्टानामेव गुर्वादीनां वीर्यसंज्ञा विशिष्टाऽऽम्नायविहितापिलौकिकीति समुद्भाव्यते । (A.S.Su.17/13)

Acharya Sushruta gives a detailed account of how to understand the astavidha veerya mentioned in the book Sushruta Samhita.

तेषां मृदुशीतोष्णाः स्पर्शग्राह्याः, पिच्छिल विशदौ चक्षःस्पर्शाभ्यां, स्निग्धरूक्षौ चक्षुषा, तीक्ष्णो मुखे दुःखोत्पादनात् .... । (S.S.Su.41/15)

Accordingly, the Veerya namely Mridu, Sheeta and Ushna is understandable through the sensation of touch while Picchila and Vishada is understandable through the perceptions of both sight and touch. Snigdha and Ruksha is known through sight and finally the Teekshna veerya is understood by the pain and suffering exhibited on the face.

6.5. Glossary

To summarize the chapter here are the few important points –

- Veerya is defined as the property of the substance that initiates an action or interaction in the body between the substance and the body.
- Veerya is said to be either 8 or 2 in number. But the 2 are also seen to be part of 8 veerya also.
- The 8 Veerya are Guru, Laghu, Sheeta, Ushna, Mridu, Teekshna, Snigdha and Ruksha
- Sushruta mentioned Picchila and Vishada instead of Guru and Laghu while Manda was introduced by Vagbhata instead of Mridu.

A summarized presentation of the Veerya

Veerya	Mahabhuta	Action	Example
Guru	Prithvi, Jala	Brimhana, Upalepa, Vrishya, Jeevana Vatahara and Kaphakara.	Metals, Masha
Laghu	Akasha, Vayu, Agni	Lekhana, Avrishya, Ropana, Kaphahara and Vatakara.	Mudga, Maricha
Manda	Prithvi, Jala	Shamana, Vatahara and Kaphakara.	Guduchi, Shali
Teekshna	Agni	Shodhana, Sangrahana, Achushana, Avadarana, Sravana and Pittakara.	Bhallataka, Lanka, Maricha, Chitraka,
Sheeta	Jala, Prithvi, Vayu	Prahladana, Abhishyandana, Jeevana, Sthirikarana, Prasadana, Kledana and Pittahara	Chandana, Ushira, Raktachandana
Ushna	Agni	Dahana, Pachana, Murchana, Swedana, Vamana, Virechana, Pittakara, Vatahara and Kaphavilayana	Bhallataka, Lanka, Maricha, Chitraka,
Snigdha	Jala	Santarpana, Brimhana, Vajeekarana, Vayasthapana, Vatahara and Kaphakara	Taila, Ghrita
Ruksha	Agni, Vayu, Prithvi	Virukshana, Sangrahana, Peedana, Kaphahara and Vatakara	Vibhitaki, Asana, Jambu
Mridu	Akasha, Jala	Prasadana of Rakta and Mamsa, Pittahara	Navaneeta, Ghrita
Vishadha	Prithvi, Vayu, Agni, Akasha	Kledachushana, Uparohana and Kaphahara	Asana, Nimba, Laja,
Picchila	Jala	Upalepa, Purana, Brimhana, Samsleshana, Vajeekarana, Kaphakara and Vatahara	Asthishrinkala, Sugar, Shleshmataka

- Even though there are 8 Veerya, the most commonly used are Dvividhaveerya namely Ushna and Sheeta.
- Even though both Veerya and Guna are named the same, the two are different in terms of the condition and influence that the veerya exerts.

6.6. Exercise

Long Answers

1. Define Veerya, explain Astavidhaveerya in detail
2. Define Veerya, explain the rationale for the conceptualization of Astavidhaveerya in detail.
3. Explain the action of Astavidhaveerya on Dosha, Dhatu, Mala in detail.
4. Explain Veeryopalabdhi and the clinical application of Veerya in detail.

Short Answers

1. Explain the Ushna-Sheetaveerya in detail
2. Explain veeryopalabdhi as per Sushruta in detail
3. Explain the Karma on Dosha, Dhatu and Mala of Snigdha and Rukshaveerya
4. Explain the difference between Guna and Veerya in detail

Multiple Choice Questions

1. Who mentioned Manda as one among the Astavidhaveerya?
   a. Vagbhata (Astanga Sangraha) b. Sushruta
   c. Charaka d. Bhavaprakasha
2. To which type of veerya substance is Bilva an example as per Chakrapani?
   a. Teekshna b. Madhyama
   c. Mridu d. None of the above
3. Which guna is considered by Sushruta instead of Guru and Laghu while enumerating Astavidhaveerya?
   a. Manda & Teekshna b. Mridu & Kathina
   c. Vishada & Picchila d. Sukshma & Sthula
4. What are the Veeryopalabdhihetu as per Charaka Samhita?
   a. Pratyaksha b. Anumana
   c. Pratyaksha by Sparsha d. Pratyaksha & Anumana
5. Which Veerya can be understood by Chakshu as per Sushruta?
   a. Snigdha b. Sheeta c. Teekshna d. Mridu
6. Which Veerya can be understood by Chakshu and sparsha as per Sushruta?
   a. Snigdha b. Picchila c. Ruksha d. Teekshna
7. Which Veerya can be understood by Sparsha as per Sushruta?
   a. Mridu b. Snigdha c. Vishada d. Guru
8. Which Veerya can be understood by Dukha of Mukha as per Sushruta?
   a. Mridu b. Vishada c. Ruksha d. Teekshna

Answer Key

1 a	2 b	3 c	4 d	5 a	6 b	7 c	8 d

Bibliography

1. Sharma P. V. (1984). Dravyaguna Vignyana. Varanasi. Chaukhambha Bharati Academy.
2. Agnivesha (1998). Charaka Samhita (Vol 1-2). Redacted by Charaka: Hindi commentary by Kashinatha Shastri, Gorakhanatha Chaturvedi: Rajeshwaradatta Shastri, Yadunandana Upadhaya, Ganga Sahaya Pandeya, Banarasidasa Gupta (eds), Varanasi. Chaukhambha Bharati Academy.
3. Sushruta (1997). Sushruta Samhita (11th ed., Vol 1-2). Hindi commentary Ayurveda tattva sandipika by Ambikadutta Shastri, Varanasi. Chaukhambha Sanskrit Sansthan.
4. Sushruta (1945). Sushruta Samhita. Yadavji Trikamji, Narayan Ram (eds), Bombay. Nirnaya Sagar Press.
5. Agnivesha (2002). Charaka Samhita (2nd ed., Vol 1-5). Redacted by Charaka: Sanskrit commentary Ayurvedadipika by Chakrapani, Jalpakalpataru by Gangadhar: Sengupta Narendranath, Sengupta Balaichandra (eds), Varanasi. ChaukhambhaOrientalia.
6. Vagbhata (1997). Astanga Sangraha (12th ed.). Hindi commentary Vidyotini by Atrideva Gupta: Yadunandana Upadhyaya (ed.), Varanasi. Chaukhambha Sanskrit Sansthan.
7. Hegde Prakash, Harini A (2021). A text book of Dravyaguna Vijnana (1st ed., Vol 1-3). Varanasi. Chaukhambha Sanskrit Sansthan.
8. Kallianpur Supriya, Gokarn Rohit (2019). A text book of Dravyaguna Vijnana (1st ed., Vol 1-2). Varanasi. Chaukhambha Orientalia.
9. Shastry J.L.N., Nesari M. Tanuja. (2019). A text book of Dravyaguna Vijnana (Reprint., Vol 1-2). Varanasi. Chaukhambha Orientalia.
10. Subrahmanya Bhat, Pooja Bhat, & Chetan M. (2021). Endothermic reaction for Veerya analysis of Patranga (Caesalpinia sappanlinn.) - An Experimental Study. Journal of Ayurveda and Integrated Medical Sciences, 6(5), 91 - 93.
11. Acharya, Y.T. (1997). Dravyaguna Vijnanam (7th ed., Vol 1-2). Nagpur. Shree Baidyanath Ayurved Bhavan Limited.
12. Arun Kumar Gupta, B. S. Prasad (2016) Exothermic reaction for Veerya analysis of Atasi Seeds (Linumusitatissimum Linn.). Annals of Ayurvedic Medicine, 5 (1-2), 44-46.
13. Tiwari, M. ., Shinde, A., Wadadekar, A. A., & Phadke, J. J. (2023). Evaluation of seasonal variation in Veerya of vishadravya Kuchala. International Journal of Ayurvedic Medicine, 13(4), 1023–1025.

Chapter No.: 7

Concept of Prabhava

Dr. Mahesh T. S.

Objectives of the Chapter

1. **Define and Explain Prabhava with examples.**
2. **Describe Samanapratyayarabdha and Vichitrapratyayarabdha with examples**
3. **Explain clinical application of Prabhava**
4. **Discuss research updates of Prabhava**

Topics in the chapter

1. **Samanapratyayarabdha and Vichitrapratyayarabdha.**
2. **Clinical application of Prabhava and research updates.**

Introduction

The last concept on properties of substances in Ayurveda is Prabhava. Even though this is the last one, there is great emphasis on this property as it the one that produces the most under expected activity. It is that property of the substance that has the maximum influence but does get expressed in certain conditions only whenever they are conducive for the same. The property is differentiated when the substance behaves extraordinarily and is totally against the general understanding of the properties and their relation to different actions and effects. Hence Sushruta Samhita tells that the property is the one that is usually unexplainable as the actions are observed and hence cannot be logically reasoned. Thus one has to take into granted that the said action that results due to Prabhava is true and is not to be questioned or doubted.

अमीमांस्यान्यचिन्त्यानि प्रसिद्धानि स्वभावतः । आगमेनोपयोज्यानि भेषजानि विचक्षणैः ।।
प्रत्यक्षलक्षणफलाः प्रसिद्धाश्च स्वभावतः । नौषधीर्हेतुभिर्विद्वान् परीक्षेत कदाचन ।।

सहस्रेणापि हेतूनां नाम्बष्ठादिर्विरेचयेत् । तस्मात्तिष्ठेत्तु मतिमानागमे ।। (S.S.Su40/19-21)

Generally, all substances act on the basis of their properties namely Rasa, Guna, Veerya or Vipaka in the body and is can be clearly analysed through the effects that it exhibits. Normally, the dominant Mahabhutas in the substance gives rise to specific properties like Prithvi and Jala Mahabhuta gives rise to Madhura rasa, etc will be producing the effect of Brimhana or nourishing the body tissues which is also nothing but the effect of the action attributed to Jala and Prithvi Mahabhuta. This match of property and action is a common phenomenon. But when there is an exception in this match like Draksha where being Madhura rasa, Madhura vipaka and Guru, Snigdha Guna exhibits virechana effect, then the property is said to be the nature of the substance. This nature is an uncommon one and is difficult to be traced or understood. Such a property is known as Prabhava.

एतमेव प्रभावार्थमुपसंहति रसेनेत्यादि । रक्षादिभिकरणैर्द्रव्यं यतः कर्मकरोति तत् प्रभावेनान्यथा कुरुतेविपरीतयतीत्यर्थः। अतस्तस्य प्रभावहतोमार्गणा न शक्यते। तथा विधभावस्वभावात्वात् ।। (Indu Commentary on A.S.Su.17/32)

Hence, it is to be understood as the nature of the substance itself as told by Acharya Indu. It can be taken as the cumulative effect of all the Mahabhuutas that are instrumental in the formation of the substance.

As per the reference from the Chakrapani's commentary on Sushruta Samhita, there are two types of shakti or potency that a substance possesses. They are the Chintya Shakti or the potency that can be analysed or assessed and Achintya Shakti or the potency that cannot be analysed or assessed. The former is Veerya while the latter one is known as Prabhava.

अत्र वीर्यशब्देन द्रव्यस्य द्विविधाऽपि चिन्त्यायाऽचिन्त्य च शक्तिरुच्यते । तत्राचिन्त्या शक्तिर्या तत्रान्तरे प्रभाव इत्युच्यते सा ग्राह्या, तस्मैव च वीर्यस्य प्रभावाख्यस्य स्वतन्त्रे तद्रव्यमात्मना किञ्चितित्यनेन ग्रहणं ज्ञेयम् । .... अचिन्त्य क्रिया हेतुश्च प्रभावापरपर्याया द्रव्याणां रसादननुरूप कार्य कारणशक्तिः । (Chakrapani commentary on S.S.Su. 40/5)

प्राभावलक्षणमाह रसवीर्येत्यादि । सामान्यमिति तुल्यता । विशेषः कर्मणामिति दन्त्याद्याक्ष्याणां विरेचनत्वादीनाम् । सामान्यं लक्ष्यत इत्यनेन रसादिकार्यत्वेन यत्रावधारयितु शक्यते कार्य तत् प्रभावकृतिमिति सूचयति, अत्र एवोक्तं प्रभावोऽचिन्त्य उच्यते रसवीर्यविपाककार्यतयाऽचिन्त्य इत्यर्थः । (Chakrapani Commentary on C.S.Su. 26/67)

Undoubtedly, this property is the most dominating one among the others but only manifests in certain given conditions that are conducive for it to express. The whole chapter is divided into 2 topics as mentioned above as per the NCISM syllabus.

1. Samanapratyayarabdha and Vichitrapratyayarabdha.
2. Clinical application of Prabhava and research updates.

Definition of Prabhava

रसादि साम्ये यत्कर्मविशिष्टं तत्प्रभावजम् । (A.S.Su.17/32)

रसवीर्यविपाकानां सामान्यं यत्र लक्ष्यते । विशेषः कर्मणां चैव प्रभावस्तस्य स स्मृतः ।। (C.S.Su.26/67)

The definition on Prabhava emphasizes that it is the activity performed by the substance which is not in line with the known properties like Rasa, Guna, Veerya and Vipaka logically. It is an extraordinary activity of the substance that get manifested at a particular condition. Hence, the effect that is generated by the action of Karma is only manifested at a particular situation. Hence, one cannot perceive it generally like the effects of other properties.

It is quite evident from the definition that the substances that exhibit Prabhava quality, does have a peculiar action compared to others with the similar properties. To illustrate and give a better understanding, there are many examples that are as illustrated below in the next topic. These examples comprise of different actions that are not commonly observed but is restricted to certain substances.

Classical Examples for Prabhava

The classical texts of Ayurveda enlist certain examples of substances showing the effect of actions that are manifested due to the property Prabhava. They are as follows.

1. कटुकः कटुकः पाके वीर्योष्णश्चित्रको मतः । तद्वदन्ती प्रभावस्तु विरेचयति मानवम् । (C.S.Su.26/68)
   दन्ती रसाद्यैस्तुल्यापि चित्रकस्य विरेचनी । (A.S.Su. 17/45 & A.H.Su. 9/26)
2. मधुकस्य च मृद्वीका घृतं क्षीरस्य दीपनम् । (A.S.Su. 17/46 & A.H.Su. 9/27)
3. कटुपाकरसस्निग्धगुरुत्वैः कफवातजित् । लशुनो वातकफकृन्नतु तैरेव यदगुणैः ।। (A.S.Su. 17/46-47)
4. मिथो विरुद्धान्वातादीन्लोहिताद्या जयन्ति यत् । कुर्वन्ति यवकाद्याश्च तत्प्रावविजृम्भितम् ।। (A.S.Su. 17/47-48)
5. विषं विषघ्निक्तं यत् प्रभावस्तत्र कारणम् । (C.S.Su. 26/69)
   शिरीषादि विषादिघ्नं स्वप्राद्यं तद्विवृद्धये । (A.S.Su. 17/48)
6. मणिमन्त्रौषधीनां च यत्कर्म विविधात्मकम् । (A.S.Su. 17/49)
7. शल्याकर्षणपुंजन्मरक्षायुवशादिकम् । (A.S.Su. 17/49)
8. दर्शनाद्यैरपि विषं यन्नियच्छति चागदः । (A.S.Su. 17/50)
9. ऊर्ध्वानुलोमिकं यच्च तत् प्रभावप्रभावितम् । (C.S.Su. 26/69)
   विरेचयति यद्ष्यमाशु शुक्र करोति वा । ऊर्ध्वाधोभागिकं यच्च द्रऽव्यं यद्वमनादिकम् ।। (A.S.Su. 17/50-51)

The examples are basically given as comparisons while some are mentioned as descriptions. The following table gives the details of the same.

Substance	Properties	Action
Chitraka	Rasa - Katu	Deepana
Danti	Vipaka - Katu Veerya - Ushna	Cause virechana
Yashtimadhu	Rasa - Madhura	No virechana
Mridvika/Draksha	Vipaka - Madhura Veerya - Sheeta	Cause virechana
Kshira	Rasa - Madhura	Cause agnimandya
Ghrita	Vipaka - Madhura Veerya - Sheeta	Cause agnideepana
Lashuna	Rasa - Katu Vipaka - Katu Guna - Snigdha & Guru	Does not aggravate Vata nor Kapha Dosha Cause Vatakaphahara action
Raktashali & Godhuma	Rasa - Madhura Guna - Snigdha Veerya - Sheeta	Cause Vatahara
Yava	Rasa - Madhura Guna - Snigdha, Guru Veerya - Sheeta	Cause Vatakara
Shireesha & Haridra	Veerya - Ushna	Cause Vishahara
Megha (Clouds) & Nidra (Sleep)	Veerya - Sheeta	Cause Vishavriddhi
Manidharana	No relevant properties	Cause Vishahara on wearing
Mantra	No relevant properties	Cause Vishahara on chant
Salya akarshana (attaction of foreign bodies)	No relevant properties	Removes foreign body by attraction

Vamana & Virechana	Urdvabhahara & Adobhagahara prabhava	Cause Vamana & Virechana respectively

Table No. 1 Examples of substances having Prabhava related actions.

These examples give an idea that the Prabhava is a effect that is not seen normally or if at all is seen prominently in a substance, then it is quite different from those which are similar to it.

रसेन वीर्येण गुणैश्च कर्म द्रव्यं विपाकेन च यद्विदध्यात् । सद्योऽन्यथा तत्कुरुते प्रभावाद्धेतोरतस्तत्र न गोचरोऽस्ति ।। (A.S.Su.17/52)

Generally, a substance acts by virtue of its properties namely Rasa, Guna, Veerya and Vipaka which are easily assessed and understood. But at times, the substances do behave in a peculiar way which is irrespective to the logical reasoning and involvement of these properties. Such an effect is undoubtedly due to a action by a particular property which is considered as Prabhava.

As Prabhava is a cumulative effect of the substance which is usually in a particular dose (if taken internally) that is variable with the body and external environment, it is important that a proper evaluation of the patient and disease is to be done. This evaluation ensures accomplishment of the desired action and its relative effect. For example, Hareetaki will act as a drug for mild virechana when used in the form of Abhayamodaka but the same is a rasayana, anulomana, etc in different doses. Understanding this as a substance with multifaceted effect is probably due to the actions that certain inactive constituents do exert in certain cases as in case of Abhayamodaka. It is this type of effect what is mentioned as Entourage effect where one constituent is not responsible. The effect was first described in Modern Pharmacology by Dr Raphael Mechoulam in the context of Cannabis and cannabinoids. The effect is not restricted to one chemical constituent but a many other which are usually non-active too. As a result the evaluation of action cannot be restricted to one property or constituent of the substance. Thus, it is said as Dravyashakti in Ayurveda as it is the cumulative effect of all the properties belonging to the five Mahabhutas present in the substance.

अमिमांस्यान्यचिन्त्यानि प्रसिद्धानि स्वभावतः । आगमोपयोज्यानि भेषजानि विचक्षणैः ।।
प्रत्यक्षलक्षणफलाः प्रसिद्धाश्च स्वभावतः । नौषधीर्हेतुभिर्विद्वान्परिक्षेत कथञ्चन ।।
सहस्रेणापि हेतूनां नाम्बष्ठादिविरेचयेत् । तस्मात्तिष्ठेत्तु मतिमानागमे न तु हेतुषु ।। (S.S.Su.40/22-24)

Further, Acharya Sushruta says that the property which is unexplainable, cannot be analysed and very well known for it action that happens by the very nature should not be doubted for the cause of such action. This is due to the fact that it has produced the action and the effect right from the past and is well noted by authentic scholars which is passed on to us. The knowledge of its action and effect is known by these scholars through direct cognition or observation in their clinical practice while treating many people with diseases. Even if anyone doubts, the substance will not change the course of its action like one cannot have virechana action performed by Ambashtadi Gana.

Today's pharmacology has a similar explanation that is only seen in a raw substance or a raw extract. This action or effect is known as 'ENTOURAGE EFFECT' which was proposed by an Dr Raphael Mechoulam and Ben Shabat Israeli Scientists. It is defined as "the enhanced or altered effect of the main active constituent of the plant due to the supplement of the inactive ones under certain given condition like dose, mode of administration, body environment, etc."

It is observed that when the compounds of the plant are isolated and administered exhibit untoward effects that are at times hazardous to health. This is not the case when the same substance when given as it is along with other constituents of the plant or the whole plant as such. At times it also observed, that they enhance the effect too synergetically.

There are two main responses between the body and the substance. The first is said to be the graded or continuous response that is being exemplified by physiological variables. Here any change can be measured as a continuous function of dose, concentration or time. The second type of response is quantal or dichotomous response where it is either a response or no response and nothing in between. The first can be taken as the actions due to the other properties namely Rasa, Guna, Veerya and Vipaka while the second is due to the action of Prabhava. The action of the substance is mediated by a molecular constituent of the organism known as the receptor. They play a crucial role in the pharmacodynamics of the substance and are instrumental in determining the effect of the substance. It is with these receptors that the endogenous or exogenous (substance or drug) chemicals interact and by doing so affects the intrinsic biochemical or physiological functioning of the receptor.

7.1. Samana Pratyayarabdha & Vichitra Pratyayrabdha

Samana Pratyayarbdha

इति सामान्यतः कर्म द्रव्यादीनां पुनश्च तत् । विचित्र प्रत्यारब्ध द्रव्यभेदेन भिद्यते ।।

स्वादुर्गुरुश्च गोधूमो वातजित्वातकृद्यवः । उष्णा मत्स्याः पयः शीतं कटुः सिंहो न शूकरः ।। (A.H.Su. 9/27-28)

All substances can be divided into two major types namely Samana Pratyayarabdha and Vichitra Pratyayarabdha. The classification is done on the basis of the composition pertaining to its properties. For example the Godhuma (Wheat) is by nature having Madhura (Swadu) Rasa and Guru guna which shows the action of Vatahara while the substance Yava (Barley) which is also possess the same property will act as Vata kara. Here Godhuma is in line with the common rule of property's manifestation and hence is known as Samana Pratyayarabdha while Yava deviates from the common rule of manifestation with respect to the properties.

विचित्राः परस्परविलक्षणाः प्रत्ययाः कारणभूता महाभूतसंघाताः तैरातब्धं द्रव्य द्रव्यान्तरविशिष्टत्वेन तेन । यस्मिन् द्रव्ये रसादीनामन्यानि महाभूतान्यारम्भकानि द्रव्यस्य चारम्भकानिऽपराणि तद्द्रव्यं विचित्रप्रत्यारब्धम्।।

(Arunadatta Commentary on A.Hr.Su. 9/27)

The word 'Pratyayarabdha' refers to the configuration of the Mahabhuta in the substance. Here 'Pratyaya' stands for Mahabhuta while 'Arabdha' stands for the configuration. Whenever the configuration of the substance remains as it is when it first interacts with the body, then it is known as Samana Pratyayarabdha else it is considered as Vichitrapratyayarabdha as explained by Hemadri. The understanding of the dominant Mahabhuta in the substance is through the perception of Rasa while other properties get manifested after a particular time which may change due to interaction with the body components. The change in mahabhuta configuration may result change in the generation of action and its related effect. This change is what makes us understand the Vichitrapratyayarabdha of the substance.

The same is clearly understood when we convert the sequence of properties into the respective Mahabhuta configuration. Accordingly, a substance with Madhura Rasa should manifest Madhura Vipaka, Sheeta Veerya, Guru guna and snigdha guna predominantly as all are the properties of Prithvi and Jala Mahabhuta. Hence, the properties of the two Mahabhuta being right opposite to Vayu and Akasha Mahabhuta that form the Vatadosha, it is expected to be Vatahara in its effect. But with respect to Yava, it acts in the opposite manner. Here the properties of Yava. Similarly, the Matsya (Fish) is Ushna Veerya and the meat of Simha (Lion) is Katu Vipaka even though possessing Madhura Rasa. On the contrary, the substances like Paya (Milk) and Shukara mamsa

(Pork or pig meat) is having the Madhura Vipaka as it is generally observed. Here the Ushna Veerya is the property of the Agni Mahabhuta while Katu is the property generated by the Agni and Vayu Mahabhuta. These changed dominance of Mahabhuta from the initial stages of metabolism is known as Vichitra Pratyayarabdha. But when there is no change in dominance, the substance is known as Samana Pratyayarabdha.

This is different from the concept or property Prabhava as there is a clear indication that a particular condition is responsible for the peculiar behaviour. In case of Prabhava, there is no reasoning nor explanation for the action to manifest.

The following are the examples of Samana and Vichitrapratyayarabdha to give a clear idea of understanding.

Name of substance	Properties with Mahabhuta configuration	Samana/Vichitrapratyayarabdha
Ajamoda	Rasa - Katu Vipaka - Katu Guna - Laghu, Ruksha Veerya - Ushna Action - Deepana	Samana Pratyayarabdha
Ashoka	Rasa - Kashaya Vipaka - Katu Guna - Laghu Veerya - Sheeta Action - Sthambhaka	Samana Pratyayarabdha
Aragwadha	Rasa - Madhura Vipaka - Madhura Guna - Guru Veerya - Sheeta Action - Sthambhaka	Samana Pratyayarabdha
Udumbara	Rasa - Kashaya Vipaka - Katu Guna - Ruksha Veerya - Sheeta Action - Sthambhaka	Samana Pratyayarabdha

Ushira	Rasa - Tikta Vipaka - Katu Guna - Ruksha Veerya - Sheeta Action - Dahaprashamana	Samana Pratyayarabdha
Karavira	Rasa - Katu Vipaka - Katu Guna - Laghu Veerya - Ushna Action - Kushtaghna	Samana Pratyayarabdha
Krishnajeeraka	Rasa - Katu Vipaka - Katu Guna - Laghu Veerya - Ushna Action - Deepana	Samana Pratyayarabdha
Khadira	Rasa - Katu Vipaka - Katu Guna - Laghu, Ruksha Veerya - Ushna Action - Deepana	Samana Pratyayarabdha
Gokshura	Rasa - Kashaya Vipaka - Katu Guna - Laghu Veerya - Sheeta Action - Sthambhana	Samana Pratyayarabdha
Chandana	Rasa - Tikta Vipaka - Katu Guna - Laghu Veerya - Sheeta Action - Dahaprashamana	Samana Pratyayarabdha
Agnimantha	Rasa - Tikta Vipaka - Katu Guna - Laghu, Ruksha Veerya - Ushna Action - Shothahara	Vichitra Pratyayarabdha

Ativisha	Rasa - Katu Vipaka - Katu Guna - Laghu, Ruksha Veerya - Ushna Action - Grahi	Vichitra Pratyayarabdha
Ashvagandha	Rasa - Tikta Vipaka - Madhura Guna - Laghu, Snigdha Veerya - Ushna Action - Balya	Vichitra Pratyayarabdha
Amalaki	Rasa - Amla pradhana 5 Rasa Vipaka - Madhura Guna - Guru, Ruksha Veerya - Sheeta Action - Pramehaghna	Vichitra Pratyayarabdha
Ardraka	Rasa - Katu Vipaka - Madhura Guna - Guru, Teekshna Veerya - Ushna Action - Deepana	Vichitra Pratyayarabdha
Eranda	Rasa - Madhura Vipaka - Madhura Guna - Snigdha, Teekshna Veerya - Ushna Action - Kushtaghna	Vichitra Pratyayarabdha
Guggulu	Rasa - Tikta Vipaka - Katu Guna - Laghu Veerya - Ushna Action - Shothahara	Vichitra Pratyayarabdha
Guduchi	Rasa - Tikta Vipaka - Madhura Guna - Guru Veerya - Ushna Action - Jwarahara	Vichitra Pratyayarabdha

Dronapushpi	Rasa - Katu Vipaka - Katu Guna - Guru, Ruksha Veerya - Ushna Action - Deepana	Vichitra Pratyayarabdha
Nagakeshara	Rasa - Kashaya, Tikta Vipaka - Katu Guna - Laghu, Ruksha Veerya - Ushna Action - Pachana	Vichitra Pratyayarabdha

Table No. 2 Examples of substances having samana and vichitrapratyayarabdha. The bold letters are the properties that have deviated.

शीतं वीर्येण यद्द्रव्यं मधुरं रसपाकयोः । तयोरम्लं यदुष्णं च यद् द्रव्यं कटुकं तयोः ।
तेषां रसोपदेशेन निर्दिश्यो गुण संग्रहः । वीर्यतोऽविपरीतानां पाकतश्चोपदेक्ष्यते ।। (C.S.Su. 26/45-46)

The reference from Charaka Samhita mentions that the substance that possess Sheeta Veerya normally has Madhura Rasa and undergo Madhura Vipaka. Similarly, substances with Ushna Veerya will be having Amla and Katu Rasa along with related Vipaka. This is the normal sequence of properties and are related to the same Mahabhuta itself. But in case of exceptional conditions these properties are opposite to the Veerya or others.

तत्र खल्वेकरसेषु द्रव्येष्वनेकदोषात्मकेषु च विकारेषु रसदोषप्रभावमेकैकश्येनाभिसमीक्ष्य ततो द्रव्यविकारयोः प्रभावतत्वं व्यवस्येत् । (C.S.Vi. 1/9)

Further in the Vimana Sthana of Charaka Samhita, the author explains that there are many substances with different Rasa and similarly there are many diseases formed by the Doshas. It is the proper understanding of the Rasa and Dosha, on how to apply its knowledge, makes the substance useful in the treatment of diseases. It is the understanding and interpretation of the concepts to the basic level namely the Mahabhuta configuration will enable to understand and apply these concepts. The natural similarity leads to supplement the action by all the properties of the substance on the Doshas of the disease thereby relieving it. Such a condition is known as Prakritisama Samaveta. This description is in line with that of Samanapratyayarabdha of Vagbhata. The equivalent description of Charaka Samhita for Vichitrapratyayarabdha of Vagbhata is Vikrutivishama Samaveta.

न त्वेवं खलु सर्वत्र । न हि विकृतिविषमसमवेतानां नानात्मकानां परस्परेण चोपहतावामन्यैश्च विकल्पनैर् विकल्पितानामावयवप्रभावानुमानेनैव समुदायप्रभावतत्वमध्यवसातुं शक्यम् ।। (C.S.Vi. 1/10)

The Vikrutivishama Samaveta is that condition where the configuration is either abnormal or the proportion of the Mahabhutas are in such a way that they undergo considerable changes in their proportions during the interactions with the body components. Thus, the actions and their relative effects differ from time to time. The changes in the property for the substance is understood by the tool of Anumana or inference. The inference is done on the basis of effects that are observable due to the action exerted by the properties.

To summarize the comparison the Samana and Vichitrapratyayarabdha, the tabulated presentation is given below:

SAMANA PRATYAYARABDHA	VICHITRA PRATYAYARABDHA
Mahabhuta configuration of properties are same	Mahabhuta configuration of properties are not same
The sequence of Rasa, Vipaka, Guna and Veerya are as per normal sequence.	The sequence of Rasa, Vipaka, Guna and Veerya are of exceptional sequence.
Can relate to the actions and the effects in which ever stage of metabolism.	Can relate to the actions and the effects in which ever stage of metabolism.
The action and effect are unidirectional	The action and effects are multidimensional.

Table No. 1 Difference between Samana and Vichitra pratyayarabdha.

7.2. Clinical Application of Prabhava and Research Updates

Clinical application of Prabhava

It is said that among the various properties of the substance, the Prabhava which is a special activity will supersede all others. Hence, its proper knowledge will be useful clinically when applied. But as it is a very powerful action like causing Shodhana karma (Vamana - vomiting, Virechana - purgation), its knowledge of how to administer and what is the optimum dose in which it produces the action is very much necessary. Actions like Vishaghna, stress relief due to manidharana, etc also needs the condition in which the substances are to be applied or used. Even the choice of the substance that produce the different activities of Prabhava also plays an important role to bring out the desired action and its relative effect. Even though with the advancement of

understanding certain actions that were classified as Prabhava is now explained with the knowledge of certain chemical constituents, this cannot explain all. As described earlier, the actions are highly diverse and is dependent on many factors. Thus, clinical application of the substance is limited to the specified ones only like Vamana by Madanaphala, Virechana by Trivrit, Agnideepana by Ghee, etc. Its relative clinical application is said to be present in a prescribed manner and have regularly produced the expected effect.

Research Updates on Prabhava

A critical literature study on the concept of Prabhava was published by Dr. Suresh Chaubey concluded that there is a necessity for a proper and standardised procedure for identification of the substance through different means like pharmacognostical, phytochemical analysis before understanding the actions that are due to Prabhava.

Even the literary survey done on the concept by Dr. Ankita Wadhwa & Satej Banne also concluded the necessity of identification procedures and evaluation of phytochemicals to understand the action of Prabhava.

A model for evaluation of Rasapanchaka was postulated through a review of related literatures both of Rasapanchaka and probable scientific mechanisms is done by Dr. Santhosh Vishwakarma. It concluded that the prabhava is infact can be evaluated through comparison of results between 2 or more substances based on the observations and data obtained from the analysis of other four properties.

7.3. Glossary

To summarize the chapter here are the few important points –

- Prabhava is a property of the substance that initiates an action on its own that differ from the normal understanding of Rasa, Veerya, Vipaka and Guna.
- Sushruta has mentioned it as Achintya Shakti and is said to be generated by the nature of dravya itself.
- Prabhava can be taken as the property that is resulted due to the cumulative effect of the constituent Mahabhutas in the substance.
- The effect of Prabhava can be equated to the Entourage effect mentioned by scientist Dr. Raphael Mechoulam.
- The entourage effect is the enhanced or altered effect of the main active constituent of the plant due to the supplement of the inactive ones under certain given condition like dose, mode of administration, body environment, etc.
- The quantal or dichotomal response of the substance can be considered to be as Prabhava.
- The Samana Pratyayarabdha dravyas are those which have the properties in-line with each other and is resultant of a common predominant Mahabhuta.
- The Vichitra Pratyayarabdha are those where the properties are resultant of the different Mahabhuta predominance in generating the relative properties of the substance.
- Various actions like Shodhana, Vishaghna, etc are related to the action due to Prabhava property in the substance.

7.4. Exercise

Long Answers

1. Define Prabhava, explain the concept in detail
2. What is Samana and vichitrapratyayarabdha? Explain in detail with suitable examples.

Short Answers

1. Explain the difference of Vichitrapratyayarabdha and Prabhava in detail.
2. Explain the clinical application of Prabhava with suitable examples.

Multiple Choice Questions

1. Which action of Draksha is considered due to the property Prabhava?
   a. Rechana b. Ruchya c. Brimhana d. Deepana
2. Which action of Madanaphala is considered to be resulted due to Prabhava?
   a. Virechana b. Vamana c. Deepana d. Vishaghna
3. Which of the following is a effect due to the property Prabhava generally?
   a. Lepana b. Brimhana c. Vishaghna d. Langhana
4. Which character enlisted by Sushruta for the property Prabhava?
   a. Achintya b. Swabhavata c. Amimamsya d. All the above
5. Which is the action mentioned by the scientist Dr Raphael Mechoulam that can be equated to Prabhava?
   a. Entourage effect b. Synergism
   c. Antagonism d. None of the above

Answer Key				
1 a	2 b	3 c	4 d	5 a

Bibliography

1. Sharma P. V. (1984). Dravyaguna Vignyana. Varanasi. Chaukhambha Bharati Academy.
2. Agnivesha (1998). Charaka Samhita (Vol 1-2). Redacted by Charaka: Hindi commentary by Kashinatha Shastri, Gorakhanatha Chaturvedi: Rajeshwaradatta Shastri, Yadunandana Upadhaya, Ganga Sahaya Pandeya, Banarasidasa Gupta (eds), Varanasi. Chaukhambha Bharati Academy.
3. Sushruta (1997). Sushruta Samhita (11th ed., Vol 1-2). Hindi commentary Ayurveda tattva sandipika by Ambikadutta Shastri, Varanasi. Chaukhambha Sanskrit Sansthan.
4. Sushruta (1945). Sushruta Samhita. Yadavji Trikamji, Narayan Ram (eds), Bombay. Nirnaya Sagar Press.
5. Agnivesha (2002). Charaka Samhita (2nd ed., Vol 1-5). Redacted by Charaka: Sanskrit commentary Ayurvedadipika by Chakrapani, Jalpakalpataru by Gangadhar: Sengupta Narendranath, Sengupta Balaichandra (eds), Varanasi. Chaukhambha Orientalia.
6. Vagbhata (1997). Astanga Sangraha (12th ed.). Hindi commentary Vidyotini by Atrideva Gupta: Yadunandana Upadhyaya (ed.), Varanasi. Chaukhambha Sanskrit Sansthan.
7. Hegde Prakash, Harini A (2021). A text book of Dravyaguna Vijnana (1st ed., Vol 1-3). Varanasi. Chaukhambha Sanskrit Sansthan.
8. Kallianpur Supriya, Gokarn Rohit (2019). A text book of Dravyaguna Vijnana (1st ed., Vol 1-2). Varanasi. Chaukhambha Orientalia.
9. Shastry J.L.N., Nesari M. Tanuja (2019). A text book of Dravyaguna Vijnana (Reprint., Vol 1-2). Varanasi. Chaukhambha Orientalia.
10. Ferber, S. G., Namdar, D., Hen-Shoval, D., Eger, G., Koltai, H., Shoval, G., Shbiro, L., & Weller, A. (2020). The "Entourage Effect": Terpenes Coupled with Cannabinoids for the Treatment of Mood Disorders and Anxiety Disorders. Current neuropharmacology, 18(2): 87–96.
11. Gabrielsson John, Hjorth Stephen (2012). Quantitative Pharmacology An introduction to Integrative Pharmacokinetic-Pharmacodynamic Analysis, Stockholm, Sweden. Swedish Academy of Pharmaceutical Sciences.
12. Chaubey, S., Chandra Tiwari, R., &Dhyani, Srishti. (2015). A Critical Review On Concept Of Prabhava. International Journal of Ayurveda and Pharma Research, 3(9): 54-61.
13. Wadhwa Ankita, Satej T Banne (2022). A Literary Survey On Concept of Prabhav (Specific Property) with Classical Examples. European Journal of Molecular & Clinical Medicine, 9 (8): 1016-1023.
14. Vishwakarma Santhosh K. R. et.al. (2017). Experimental Evaluation of Rasapanchak – A Narrative Review. Journal of Medical Science and Clinical Research, 5(9):28150-28153.

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Chapter No.: 8

Inter-Relation of Rasa-Guna-Virya-Vipaka-Prabhava

Dr. Mahesh T. S.

Objectives of the Chapter

1. **Interpret the interrelation of Rasa-Guna-Virya-Vipaka-Prabhava with respect to their strength- Pharmacodynamics.**

Topics in the Chapter

1. **Interrelation of Rasa-Guna-Virya-Vipaka-Prabhava with respect to their strength- Pharmacodynamics.**

Introduction

Ayurveda, specifies that all the properties of the plant have their own ability to initiate action so as to generate the relative effect. But at times their interactions are important to understand as one can mask the effectiveness of the other. On the contrary, the properties may help the other's effect to be enhanced synergetically. Hence, the interaction of the properties becomes all the more important to understand. The pancha laxana of the substance namely Rasa, Guna, Veerya, Vipaka and Prabhava are all different properties belonging to the substance. Even though they are present in a particular state, their interaction and dominance in a particular situation is the reason as to how a substance acts and what type of effect will be exhibited. The exhibition of the effect is understood by the condition of the Doshas that may be either depleted, vitiated or in a state of hemostasis. This is due to the action initiated by the interaction of the properties present in the substance with the components of the body.

गुणा द्रव्येपु ये चोक्तास्त एव तनुदोषयोः । स्थितिवृद्धिक्षयासतस्मातेषां हि द्रव्य हेतुका ।। (A.S.Su.17/29-30)

The present chapter is dealing with the relationship of these properties in various dimensions as described by the classical texts.

The whole chapter has only one section as per the latest NCISM syllabus namely,

1. Interrelation of Rasa-Guna-Virya-Vipaka-Prabhava with respect to their strength- Pharmacodynamics.

The word Pharmacodynamics refers to the study of effects that the substance or drug exerts on the biological systems within our body. These involve the five properties enlisted by the science of Ayurveda which are the primary cause for any action to manifest.

8.1. Interrelation of Rasa-Guna-Virya-Vipaka-Prabhava with Respect to their Strength-Pharmacodynamics

The classical texts of Ayurveda have enlisted various rules to explain the interaction of the properties that are present in the substance. Based on various references, Acharya P V Sharma has enlisted four rules in his book Dravyaguna Vignyana Vol 1. The rules enumerated are the references compiled from different classical texts especially the brihatrayee and the laghutrayee. These references also give the idea of how a substance acts and reacts with the body. The rules are as below:

First Rule

शीतं वीर्येण तद्द्रव्यं मधुरं रसपाकयोः । तयोरम्लं यदुष्णं च यद्द्रव्यं कटुकं तयोः ।।

तेषं रसोपदेशेन निर्देश्यो गुणसंग्रहः । वीर्यतोऽविपरीतानां पाकतश्चोपदेक्ष्यते ।। (C.S.Su. 26/45-46)

As a common rule from the reference of Charaka Samhita, a substance with Madhura Rasa and Madhura Vipaka will have Sheeta Veerya. Similarly, substance with Amla Vipaka and Katu Vipaka will have Amla Rasa and Katu Rasa respectively with Ushna Veerya present in both cases. It is to be understood here that the Mahabhuta configuration of the three Rasa and Vipaka is the same and the Sheeta or Ushna Veerya is the result of Jala or Agni Mahabhuta present in the configuration. Thus, it makes all the way a same configuration throughout the interaction of the substance with the body. Other than these there are 3 more Rasas namely Lavana, Tikta and Kashaya. The Vipaka of these are Lavana Rasa lead to Madhura Vipaka while Tikta and Kashaya will lead to Katu Vipaka as mentioned in the chapter of Vipaka. Here even though Lavana is having Madhura Vipaka, and Tikta or Kashaya Rasa has Katu Vipaka, the Veerya is opposite to the general rule namely Ushna and Sheeta Veerya respectively. Here it is to be remembered from the context of Rasa that Lavana Rasa is resultant of Agni Mahabhuta while Kashaya and Tikta don't by nature. Thus, Lavana Rasa is commonly have Ushna Veerya, while Tikta and Kashaya will have Sheeta Veerya.

Second Rule

रसं विपाकस्तौ वीर्यं प्रभावस्तान्यपोहति । वलसाम्ये रसादीनामिति नैसर्गिकं वलम्।। (C.S.Su. 26/72-73 & A.S.Su.17/25-26)

Here the rule states that whenever there is an equal influence of the different properties namely Rasa, Vipaka, Veerya and Prabhava on the body, then the final effect is exhibited by the Naisargika Bala or Prabhava itself. The influence of the Rasa is restricted to the region of mouth and adjoining areas while the Vipaka is then seen to have its influence when the metabolites are formed. But the influence of Veerya and Prabhava is not restricted to a portion or region of the body. It starts right from the moment it comes in contact of the body itself and it ensures its presence till it gets completely metabolised. As Prabhava or Naisargika Bala, being a cumulative effect has the upper hand and thus produce a notable effect at a given condition. This rule is usually seen to establish a sequence of event where the property Prabhava initiates an activity as they are decisive in their effect. The rule holds good only when all the properties are equally influencing the activities in the body.

Third Rule

किञ्चिद्रसेन कुरुते कर्म वीर्येण चापरम् । द्रव्यं गुणेन पाकेन प्रभावेण च किञ्चित्।। (C.S.Su.26/71-72 & A.S.Su.17/23)

तद्रव्यमात्मना किञ्चित्किञ्चिद्वीर्येण सेवितम् । किञ्चिद्रसविपपाकाभ्यां दोषं हन्ति करोति वा ।। (S.S.Su.40/17)

Here the rule says that every property present in the substance may it be, Rasa, Guna, Veerya, Vipaka or Prabhava will surely initiate an activity on its own. These actions also will be generating the related effect also. But only the one which has exerted the maximum influence will be exhibited while others are dormant. As per this rule, every property of the substance will be exerting its influence in the region where it is being activated. Accordingly, Rasa in the mouth and Vipaka after absorption and during metabolism. While the Guna and Veerya is seen to have influence the moment the substance comes in contact with the body. The Prabhava will also have the influence only when the conditions are favourable for its manifestation. But all the properties whether recognizable or not will have their own influence on the Doshas and other components of the body due to the interaction that they have

Fourth Rule

यद्यद्द्रव्ये रसादीनां बलवत्वेन वर्तते । अभिभूयेतरांस्तत्तत्कारणत्वं प्रपद्यते ।।

विरुद्धगुणसंयोगे भूयसाऽल्पं हि जीयते । (A.S.Su.17/24-25)

विरुद्धाऽपि चान्योन्यं रसाद्याः कर्मसाधने ।। नावश्यं स्युर्विघाताय गुणदोषा मो यथा ।
रसवीर्यप्रभृतयो भूतोत्कर्षापकर्षतः ।। एकरूपा विरूपावा द्रव्यं समधिशेरते । (A.S.Su.17/26-28)

Here the rule is a continuation and a complement to the previous one. Accordingly, it says that undoubtedly all the properties do exert their influence in their respective zones or region and may at times be opposite to each other. But still the activity is always initiated and performed by them. The opposite condition will not stop the properties from performing the related actions. Only effect is the one that is dominant gets exhibited while the less dominant ones become masked by the dominant ones. If they are not opposite then the effect is a augmented as each of them support the other. Moreover, all properties are exhibited is by the dominant Mahabhuta present in the matrix of the substance. If the dominance is weak then the opposite charactered Mahabhutas take their place leading to the exhibition of the opposite characters.

It is well known that all the substances are made up of the five Mahabhutas in varying proportions including our body, it is quite evident that all the five will exert their influences on the respective components of the body. These influences are truly dependent on the proportion of these Mahabhutas that are present in the substance. Hence only the dominant effect will be recognised while the less dominant ones are either masked or ignored or even goes unnoticed.

8.2. Glossary

To summarize the chapter here are the few important points –

- Rule 1

RASA	VEERYA	VIPAKA	COMMON MAHABHUTA
Madhura	Sheeta	Madhura	Jala & Prithvi
Amla	Ushna	Amla	Agni
Lavana	Ushna	Madhura	Agni & Prithvi
Katu	Ushna	Katu	Agni & Vayu
Tikta	Sheeta	Katu	Vayu
Kashaya	Sheeta	Katu	Vayu & Prithvi

Table No. 1 Relationship between Properties.

- Rule 2

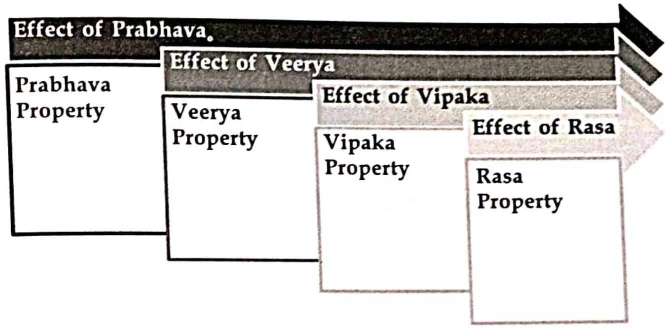

Figure No. 1 Effect of respective properties when the strength of the influence is equal.

- Rule 3

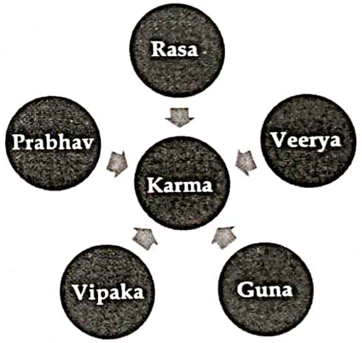

Figure No. 2 Difference between Samana and Vichitra pratyayarabdha.

- Rule 4

FAVOURABLE PROPERTY	OPPOSITE PROPERTY	DOSHA
Madhura, Amla Lavana	Katu, Tikta Kashaya	Kapha
Katu, Tikta, Kashaya	Madhura, Amla Lavana	Vata
Amla, Lavana, Katu	Kashaya, Tikta, Madhura	Pitta
Sheeta Veerya	Ushna Veerya	Kapha/Vata
Ushna Veerya	Sheeta Veerya	Pitta
Katu/Amla Vipaka	Madhura Vipaka	Pitta/Vata
Madhura Vipaka	Katu/Amla	Kapha

Table No. 2 Properties with their opposites and their influence on the Doshas.

8.3. Exercise

Long Answers

1. What are the Panchalaxana of the substance and explain in detail their inter-connections.

Short Answers

1. Explain briefly the common rules or observations present between the properties of the substance.
2. Explain in detail the relationship of the properties as told by Vagbhata in the text Astanga Sangraha.

Multiple Choice Questions

1. Which is the vipaka of Madhura as per the common rule? (a)

   a. Madhura b. Amla c. Katu d. None

2. Which Veerya and Vipaka is the combination for Lavana Rasa (b)

   a. Madhura & Sheeta b. Madhura & Ushna
   c. Amla & Ushna d. Katu & Ushna

3. Which author opines that all the inspite of being opposite do act in the body?(c)

   a. Charaka b. Sushruta c. Vagbhata d. Bhavamishra

4. Which are the authors who mention that all the five properties perform action? (d)

   a. Charaka & Sushruta b. Vagbhata & Sushruta
   c. Charaka & Vagbhata d. Charaka, Sushruta & Vagbhata

Answer Key			
1 a	2 b	3 c	4 d

Bibliography

1. Sharma P. V. (1984). Dravyaguna Vignyana. Varanasi. Chaukhambha Bharati Academy.
2. Agnivesha (1998). Charaka Samhita (Vol 1-2). Redacted by Charaka: Hindi commentary by Kashinatha Shastri, Gorakhanatha Chaturvedi: Rajeshwaradatta Shastri, Yadunandana Upadhaya, Ganga Sahaya Pandeya, Banarasidasa Gupta (eds), Varanasi. Chaukhambha Bharati Academy.
3. Sushruta (1997). Sushruta Samhita (11th ed., Vol 1-2). Hindi commentary Ayurveda tattva sandipika by Ambikadutta Shastri, Varanasi. Chaukhambha Sanskrit Sansthan.
4. Sushruta (1945). Sushruta Samhita. Yadavji Trikamji, Narayan Ram (eds), Bombay. Nirnaya Sagar Press.
5. Agnivesha (2002). Charaka Samhita (2nd ed., Vol 1-5). Redacted by Charaka: Sanskrit commentary Ayurvedadipika by Chakrapani, Jalpakalpataru by Gangadhar: Sengupta Narendranath, Sengupta Balaichandra (eds), Varanasi. Chaukhambha Orientalia.
6. Vagbhata (1997). Astanga Sangraha (12th ed.). Hindi commentary Vidyotini by Atrideva Gupta: Yadunandana Upadhyaya (ed.), Varanasi. Chaukhambha Sanskrit Sansthan.
7. Hegde Prakash, Harini A (2021). A text book of Dravyaguna Vijnana (1st ed., Vol 1-3). Varanasi. Chaukhambha Sanskrit Sansthan.
8. Shastry J.L.N., Nesari M. Tanuja (2019). A text book of Dravyaguna Vijnana (Reprint., Vol 1-2). Varanasi. Chaukhambha Orientalia.

Chapter No.: 9

Concept of Karma

Dr. Mahesh T. S.

Objectives of the Chapter

1. Define Karma.
2. Discuss Karma laxana
3. Explain Deepana Karma in relation with Appetizers
4. Critically analyse Deepana Dravyas with its Gunas and applications in various clinical conditions
5. Explain Pachana Karma in relation with Digestives
6. Critically analyse Pachana Dravyas with Gunas and discuss its applications in various clinical conditions.
7. Explain Samshodhana Karma in relation with contemporary pharmacological action.
8. Discuss Samshodhana Karma and its clinical application.
9. Explain Samshamana Karma in relation with contemporary pharmacological action.
10. Describe Samshamana Karma and its clinical application.
11. Explain Anulomana Karma in relation with Carminative.
12. Describe Anulomana Karma and its clinical application.
13. Explain Sransana Karma in relation with contemporary pharmacological action.
14. Describe Sransana Karma and its clinical application.
15. Explain Bhedana Karma in relation with strong laxative action.
16. Describe Bhedana Karma and its clinical application.
17. Explain Rechana Karma in relation with Purgative action.

18. Describe Rechana Karma and its clinical application.
19. Discuss Chedana Karma and its clinical application.
20. Explain Lekhana Karma in relation with contemporary pharmacological action.
21. Describe Lekhana Karma and its clinical application.
22. Explain Grahi Karma in relation with contemporary pharmacological action bowel binding.
23. Describe Grahi Karma and its clinical application.
24. Explain Stambhana Karma in relation with contemporary pharmacological action.
25. Describe Stambhana Karma and its clinical application.
26. Discuss Madakari Karma with examples
27. Discuss Pramathi Karma and its clinical application
28. Discuss Abhishyandi Karma with examples
29. Discuss Vyavyi Karma with examples
30. Discuss Vikashi Karma with examples
31. Explain Rasayana Karma in relation with Rejuvenators
32. Analyse Types of Rasayana dravyas with its guna and discuss its clinical applications with research updates
33. Explain Vajeekarana Karma in relation with Aphrodisiacs
34. Critically analyse Types of Vajeekarana dravyas with its guna karma and discuss its clinical applications with research updates
35. Explain Medhya Karma in relation with contemporary pharmacological actions
36. Critically analyse Medhya dravya and discuss its clinical application with research updates.

Topics in the Chapter

1. **Individual Karma, correlation with contemporary pharmacological action, examples, clinical application and research updates.**
   - a. Deepana
   - b. Pachana
   - c. Samshodhana
   - d. Samshamana
   - e. Anulomana
   - f. Sransana
   - g. Bhedana
   - h. Rechana
   - i. Chedana
   - j. Lekhana
   - k. Grahi
   - l. Stambhana
   - m. Madakari
   - n. Pramathi
   - o. Abhishyandi
   - p. Vyavyi
   - q. Vikasi
   - r. Rasayana
   - s. Vajikarana
   - t. Medhya

Introduction

Karma or action with respect to the substance that are used both as food and medicine forms the core subject matter of Dravyaguna (Ayurvedic Pharmacology). This is due to the fact that the pharmacology is the one that deals with the understanding of how the substance acts on the body along with the analysis of how the body reacts to the substance when administered. The earlier chapters gives us the idea of the various concepts of Dravyaguna that helps in proper analysis and understanding of the pharmacological actions. Hence, it forms an important basic part for the explanation, understanding and analysis of any Karma. Basically, explanation of Ayurvedic action is a complex one and is not generally restricted to a particular system. As the Dosha is not only present in the a particular organ but in every cell within the body, similarly the action described in Ayurveda is to be considered to every cell within the body. It is true that the effect is seen on a organ in a gross manner but the actions represent to the deeper parts of the body. For example, the action Deepana is not only restricted to appetite feeling within the stomach or its secretions, which is a gross understanding but into the cell level where the craving for energy by the cell is also to be considered. Hence, to have a holistic effect, the understanding of drug action should not be restricted to the main organ or system but in a very holistic way such that the evaluation of its related effect will be complete. The present chapter is dealing with various pharmacological actions that are commonly mentioned in Ayurveda as mentioned in the syllabus. Here we will be restricting ourselves to the syllabus so that it doesn't become a very elaborate one. The chapter will also give a detailed explanation, understanding and analysis of these actions. The whole chapter is in two sections as per the latest NCISM syllabus namely

1. General explanation of Karma
2. Individual Karma, correlation with contemporary pharmacological action, examples, clinical application and research updates. The Karma or actions that are described are as mentioned in the section topics of the chapter.

9.1. General Explanation of Karma

कर्म (न) क्ली (यत्क्रियते तत् । कृ + मनिन् ।

कर्त्तुः क्रियया यद्व्याप्यते तद्वा क्रियाण्याप्यं कर्मेति केचित् ।। (S.K.D.vol. 2)

क्रियते इति कर्म । (D.G.V. vol 1)

The word Karma is originated from the phrase that explains as the factor that performs. It stands to an activity that results in an outcome that is known as Karmaphala or Kriya. Hence the action or Karma is understood by the effect that it produces.

Karma is a word in Sanskrit that has several meanings like any other important terminology which is picked up as per the context where it has been mentioned. It varies from the materialistic or physical aspect to the abstract or even spiritual one too.

क्रिया लक्षणं कर्म। (R.S.1/171)

In the context of Dravyaguna, the term Karma assumes the meaning of action that results due to the interaction between the properties of the substance with that of the body. This Karma is said as Aushadha Karma or pharmacological actions.

Definition of Karma

संयोगे च विभागे च कारणं द्रव्यमाश्रितम् । कर्तव्यस्य क्रियाकर्म, कर्म नान्यदुपेक्षते।। (C.S.Su.1/52)

यत् कुर्वन्ति तत् कर्म । (S.S.Su.42/5)

क्रिया लक्षणं कर्म । (R.S. 1/171)

The definition of Charaka gives a detailed and precise explanation of Karma. As per the lines "Karma is an activity that is present within the substance inherently and is responsible for the Samyoga (association) and Vibhaga (separation) that happens simultaneously which is specified as its prime responsibility but is

not dependent only on the substance for its manifestation". This understanding gives an idea that the actions are having several factors that make it manifest.

Laxana of Karma

एवं द्रव्यगुणं संयोगविभागेष्वनपेक्षकारणमिति कर्म लक्षणं । (V.D.1/1/17)

The definition of Karma in the context of the subject Dravyaguna is mainly concentrated on the properties or Guna that are present in the substances or Dravya which are basically responsible for the Samyoga (conjugation) and Vibhaga (detachment). The process of Samyoga (conjugation) and Vibhaga (detachment) is possible through the substance and is seen to be happening simultaneously, still it is independent on its manifestation. This can be clearly explained by the help of Karya-Karana Siddhanta or the cause and effect theory.

According to this theory, every action is resulted by the cumulative effect of three factors or causes namely Samavaya karana, Asamavaya karana and Nimitta karana. Any dislodging of the cause among them will not result in the manifestation of action as detailed in the context of Padartha Vijnyana. Hence mere presence of a substance or a quality in the substance will not be enough for the manifestation of the action. Accordingly, the guna or the properties become the samavayi karana, the intensity or potency of the property becomes the asamavayi karana and the substance, dosage, mode of administration, dosage form, etc as such forms the nimitta karana for a particular action to result. It is the cumulative effect of all these that result in a particular effect that may be the desired or the undesired one.

Modality of Aushadha Karma (Pharmacodynamics & Pharmacokinetics) in Ayurveda

A drug or substance action is understood in two ways namely Pharmacokinetics and Pharmacodynamics. The pharmacokinetics of the substance is defined as the characteristic interaction of a substance and the body in terms of absorption, distribution, metabolism and excretion. Similarly, the pharmacodynamics of the substance is defined as the study of the drug's molecular, biochemical and physiological effects or actions. In short the pharmacokinetics is the aspect of how the body deals with the substance while pharmacodynamics is the aspect of what the substance does to the body.

Ayurveda too has clearly understood the pharmacokinetics of substance as laid down clearly by Acharya Sushruta.

तत्र पाञ्चभौतिकस्य चतुर्विधस्य षड्रसस्य द्विविध वीर्य्यस्याष्टविधवीर्य्यस्य वाऽनेकगुणस्योपयुक्तस्याहारस्य सम्यक्परिणतस्य यस्तेजोभूतः सारः परमसूक्ष्मः सरसेत्युच्यते । तस्य च हृदयं स्थानं स हृदयाचतुर्विंशति धमनीरनुप्रविश्योर्ध्वगा दश दश चाधोगामिन्यश्चतस्रश्च तिर्यग्गाःकृत्स्नं शरीरमहरहस्तर्पयति वर्द्धयति धारयति यापयति चादृष्टहेतुकेन कर्मणा । (S.S.Su.14/3)

Substance that is being taken internally whether medicine or food is made up of the 5 Mahabhuutas which are of 4 forms namely drinks (Paana), solid foods (Ashana), condiments (Bhakshya) and semisolid food or linctus (Lehya). These substances are composed of 6 Rasa, 2 or 8 Veerya and many other properties which when properly metabolised by the Tejabhuta (Agni or metabolic activity) will lead to the production of the essence that are simpler or minute or in absorbable form and is known as Rasa or Aahara rasa (Absorbable forms of the substance). The substances thus absorbed enter the Hridaya (usually equated to heart) which gets spread to all parts of the body through the Dhamani (usually equated to arteries) in different directions. Thus distributed will lead to different effects like providing Tarpana (Nutrition), Vardhana (Growth), Dharana (Stabilize) and Yapana (Maintenance) which can be easily observed according to the substance that is taken.

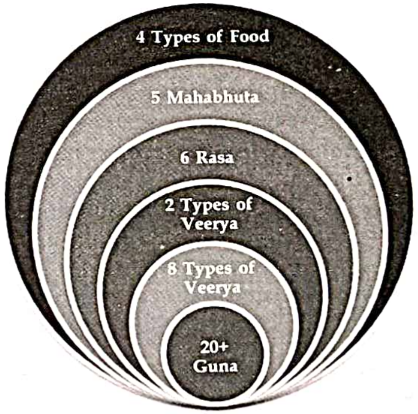

Figure No.1 Composition of substance

भौमाप्याग्नेयवायव्याः पञ्चोष्मणः सनाभसा । पञ्चाहारगास्वान्स्वान्पार्थिवादीन्पचन्ति हि ।।
यथा स्वं च पुष्णन्ति देहे द्रव्यगुणाः पृथक् । पार्थिवाः पार्थिवानेव शेषाः शेषांश्च कृत्स्नशः ।।
सप्तभिर्देहधातारो धातवो द्विविधं पुनः । यथा स्वमग्निभिः पाकं यान्ति किट्टप्रसादवत् ।। (C.S.Chi.15/13-15)

The substances that originate from the five Mahabhuta will be further metabolised by the 5 Bhutagni which further simplifies the absorbed material and

nourish their respective components in the body which again is metabolised by the Dhatvagni to form the different Dhatu of the body. During these processes there will be two byproducts namely the Prasada (Nutrition) and Kitta (metabolic waste). Finally the substance is excreted through the excretory channels present in the body.

Similarly, the explanation of pharmacodynamics can be obtained from the classical Ayurvedic texts also.

अनेन निदर्शनेन नानौषधीभूतं जगति किञ्चिद् द्रव्यमस्तीति कृत्वा तं तं युक्तिविशेषमर्थं चाभिसमीक्ष्य स्ववीर्य्यगुणयुक्तानि द्रव्याणि कार्मुकाणि भवन्ति । तानि यदा कुर्वन्ति स कालः यत्कुर्वन्ति तदधिकरणं यथा कुर्वन्ति स उपायः यन्निष्पादयन्ति तत् फलमिति ।। (S.S.Su.41/9)

अनेनोपदेशेन नानौषधिभूतं जगति किंचिद् द्रव्यमुपलभ्यते तां तां युक्तिमर्थं च तं तमभिप्रेत्य । न तु केवलं गुणप्रभावादेव द्रव्याणि कार्मुकाणि भवन्ति । द्रव्याणि हि द्रव्यप्रभावाद् गुणप्रभावाद् द्रव्यगुणप्रभावाच्च तस्मिंस्तस्मिन् काले तत्तदधिकरणमासाद्य तां तां च युक्तिमर्थं च तं तमभिप्रेत्य यत् कुर्वन्ति तत् कर्म येन कुर्वन्ति तद्वीर्यं यत्र कुर्वन्ति तदधिकरणं यदा कुर्वन्ति स कालः यथा कुर्वन्ति स उपायः यत् साधयन्ति तत् फलम् ।। (C.S. Su. 26/13)

All the substance that which is composed of its properties (Rasa, Guna, Veerya, Vipaka and Prabhava) is administered with due consideration to the logical inclination (Yuktivishesha) will be useful as medicament to treat one or the other diseases.

The activity of the substance is not just based on the property of the substance (Gunaprabhava) but also by virtue of the nature of the substance (Dravyaprabhava) or even both (Dravyagunaprabhava). Gunaprabhava refers to the effect of the properties namely the Rasa, Guna, Veerya, Vipaka and Prabhava that are present in the substance. The word Dravyaprabhava refers to the effect of the nature of the substance like its panchamahabhuta configuration, dominance of the Mahabhuta, structural framework, environment where it has grown or obtained, etc factors that influence its natural framework is to be considered. Finally, the Dravyagunaprabhava refers to the combined action of both nature and property of the substance as such.

Thus, when the substance is administered will bring out a change by the process of diassociation and reassociation which is said as Karma. The property, nature or both of the substance that brings about this action is to be considered as Veerya here. The said action is performed over a site or a region or even the whole body depending on the action performed, where it is known as Adhikarana. The pathological stage of the condition along with the time taken for the whole process of activity to be accomplished is known as Kala. The conditions which includes both the external factors like dose, media of administration, dosage forms, time of administration, etc and internal factors like food interactions, internal environment, drug interactions, etc., that are

instrumental in bringing out the action is Upaya. Finally, the outcome (Sadhayanti or Nishpadayanti) or the effect which may be the desired or undesired or both as the case may be is known as Phala.

तां तां युक्तिमासाद्येति तां तां योजनां प्राप्य यत् कुर्वन्तीत्यादावुदाहरणं यथा शिरोविरेचनद्रव्याणि यत् शिरोविरेचनं कुर्वन्ति, तत् शिरोविरेचनं कर्मः येनोष्णतवादिकारणेन शिरोविरेचनं कुर्वन्ति तद्वीर्यं वीर्यं शक्तिः सा च द्रव्यस्य गुणस्य वा यत्र शिरोविरेचनं कर्वन्ति तदधिकरणं शिरः नान्यत्राधिकरणे शिरोविरेचनद्रव्यं स्यदित्यर्थः यदेति वसन्तादौ शिरोगौरवादियुक्त च काले एतेनाकले शीतादौ शिरोविरेचनं स्तब्धत्वात्र कार्मुकं किन्तु स्वकाल एव यथा येन प्रकारेण प्रधमनावपीडनादीना तथा " प्रसारिताङ्गमुत्तानं शयने संस्तरामृते । ईषत्प्रलम्बशिरसं संवेश्य चावृतेक्षणम्" – इत्यादिना विधिना कुर्वन्ति, स उपायः यत् साधयन्ति शिरोगौरव शूलाद्यमुपरमं, यत् फलम् फलं उद्देश्यम् । कर्म कार्यं साधनम् उद्देश्यं फलं साध्यं यथा – या गति धर्मः कार्यतया कर्म तज्जन्यस्तु स्वर्गादिरुद्देश्यः फलम् रावं वमनादिष्वपि कर्माधिकरणादर्न्तयम् ।। (Chakrapani Commentray on C.S.Su. 26/13)

In the commentary of Chakrapani, the example of Shirovirechana is given to the context above. Accordingly, the karma is the shirovirechana karma followed by the property like the ushna property responsible for initiating the action of Shirovirechana is the Veerya, the shira or head which is greatly affected by the process is the adhikarana, the causes like season Eg.. vasanta ritu when the symptoms like shirogaurava (heaviness of head) manifest is known as kala, the type of shirovirechana procedure used for the purpose is an example for upaya and finally the accomplishment of the desired result like relief from the heaviness of head is known as Phala. Even though the karma or drug action is inevitable once administered, and is bound to produce an effect, all the other actions like Vamana, etc can be evaluated similarly.

Figure No.2 Pharmacodynamic of substance explained in Ayurveda

9.1. Indivdual Karma, Correlation with Contemporary Pharmacological Action with Examples, Clinical Application and Research Updates

9.1.1. Deepana

Definition-

दीपनीयो वन्हेरुद्दीपनाय हिताः । (Gangadhara Commentary on C.S.Su.4/8)

पचेन्नामं वन्हिकृच्च दीपनं तद्यथा मिशि । (S.S.Pu.4/1)

पचेन्नाम वन्हिकृद्यदद्दीपनं तद्यथा मिशि । (Bhavaprakasha Mishrakaprakarana 212)

यदग्निकृत्पचेन्नामं दीपनं तद्यथा घृतं । (K.N. Mishrakavarga 190)

यदाग्निकृत्पचेन्नामं दीपनं तद्यथा घृतं । (Hemadri Commentary for A.H.Su.14/7)

The action of the substance that activates the Agni (Digestive fire) resulting in the increase of appetite but doesn't aid in the metabolism of Ama (unprocessed or intermediary metabolites) is known as Deepana and the substance that has the ability to perform this action is known as Deepaneeya.

दीपनं दीपनीयं च वन्हिकृद् वन्हिवर्द्धनम् । (K.N. Mishrakavarga 190)

The action is also called by the names Deepana, Deepaneeya, Vanhikrud and Vanhivardhana. All these names are directed towards its effect of increasing the Agni (Digestive fire) which is understood by the increase in appetite.

Modern contemporary pharmacological action – Appetite is regarded as the urge to eat or drink which is generally achieved by the release of hypothalamic peptides that are integrated with catecholaminergic, serotoninergic and opioid signaling. The most common action that has been associated is the Appetizer activity as mentioned in many Ayurvedic authors in their text books. But other actions like Appetite stimulants, Stomachics, Anti-flatulent and Carminatives are also are to be included under this activity. Above all any action that leads to slight increase in secretion that gives the effect of craving in cells also. For example, a research study showed that an immune response will make the T-cells to crave for more fuel (ATP) during the initial expansion and also during the period of dormancy (Memory T-cells). Hence these cells use fatty acids, amino acids and glucose for survival. Both in the gastric and in the cells the need for more energy (food/fuel) is triggered by the activation of histamines leading to more secretion. Appetite Stimulants is also to be considered in the context of Deepana action. This action is resulted by the use of simple preparations like lemon pickles or even bitter aromatic substances like Mishi (Foeniculumvulgare Mill.), alcohol (10%), etc

Thus the Deepana action is understood in the following way:

a. System associated–mainly Digestive System but also to be considered is cellular level metabolism.

b. Panchamahabhuta responsible– Prithvi & Agni Mahabhuta; Mainly Agni Mahabhuta

c. Rasapanchaka responsible – Amla, Lavana or Katu Rasa; Teekshna, Ushna, Laghu, Sukshma, Khara and Vishada Guna; Ushna Veerya; Katu Vipaka

d. Contemporary pharmacological action – Appetizer or Appetite stimulant

e. Examples – Mishi (*Foeniculum vulgare* Mill.) and Ghrita (Ghee), Charaka Samhita Deepaneeya Gana (Details discussed in Chapter 10)

f. Clinical Application – Clinically, Agni is an important factor which is responsible for the physiological and pathological conditions of the body. Infact there is a generalised opinion that Mandagni (Low Appetite) is considered as the main cause for all diseases. Agni is of three types namely Jataragni, Bhutagni and Dhatvagni. Thus, the action can be on any of these three Agni or all. But the action is evidently seen when it is acting upon the Jataragni. The action of the drug with reference to Deepana is towards the improvement of Agni. Hence, the condition of Agni that is to be evaluated and a relevant Deepana drug is to be administered. For example, Mishi which works on the Jataragni by virtue of its Tikta and Katu Rasa along with Teekshna Guna and is much conducive for appetite disorders normally. The other example being Ghrita is usually considered as Deepana in the reference. Here the action is with regards to the Bhutagni and Dhatvagni by facilitating the absorption of the food nutrients into the the body or cell. It is clearly known that among all the substances, Ghee is the one that can facilitate the crossing of blood-brain Barrier (BBB) owing to better absorption. Moreover, 96% of cow's ghee gets digested and are usually absorbed directly without emulsification. In this manner, both the examples of Deepana mentioned are having the same action but in different areas of the body.

g. Research Updates – Various researches pertaining to literary and experimental aspects are done on ghee especially cow's ghee. Some of them to be noted here are –

1. A detailed review article on the health benefits of ghee by Sindhuja S et. al. showcased the varied benefits of Cow's ghee 0.5 to 0.9g per day preferably imparts a various health benefits such as binding of toxins, enhances complexion and glow of body, a rejuvenator for the eyes, physical and intellectual stamina etc. in addition to sustenance of energy.

2. An article on Ghrita with the title "Ghrita as a carrier system for Drug Delivery in Ayurveda across Blood Brain Barrier (BBB)" by Gunjal Priya et.al. concluded that ghee aids in the transport of the components suspended in it are actively passed through the various barriers including the BBB. The lipohilic action of ghee facilitates this transport to the target organ and its final delivery.

3. An article on the effect of ghee on the levels of serum lipid and microsomal peroxidation drew conclusions that high doses of medicated ghee decreases the lipid profile in psoriasis patients. It also showed that diet supplemented with 10% ghee decreased the arachidonic acid levels in a dose-dependent pattern. It also decreased prostaglandin, thromboxane and leukotrienes by activated peritoneal macrophages.

These studies show that ghee is having more of a systemic effect leading to Deepana action rather than just increase of appetite in the digestive system.

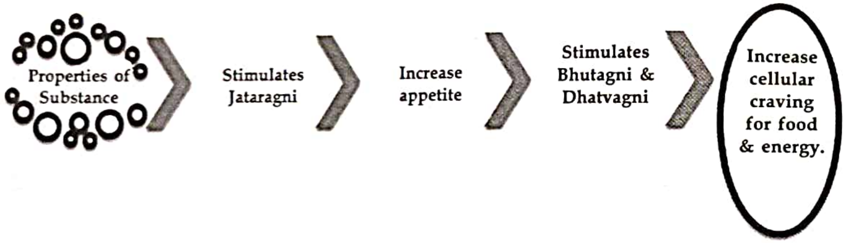

Figure No.3 Summarized presentation of Deepana Action

9.1.2. Pachana

Definition-

पचन्तमग्निं प्रतिपक्षक्षपणेन वलदानेन च यत् पाचयति तत् पाचनम् । (Chakrapani Commentary on C.S.Su. 22/8)

पचतोऽग्नेः पक्तुं शक्तिमधिकां तदुत्पादयति तद् द्रव्यं क्रिया वा पाचनमुच्यते । (Hemadri Commentary on A.H.Su.14/7)

पाचनं पाचयेद्दोषान् सामान् शमनमेव तु । (A.H.Su.14/7)

पचत्यामं न वन्हि च कुर्याद्यतद्धि पाचनम्। नागकेशरवत् विद्यात् ....।। (S.S.Pu.4/1)

आहारंपचन्तंजाठरमग्निंसन्धूक्षयन्तितत्वलम्वर्धयन्तिच।सैन्धवंमादिनिद्रव्याणि । (Gangadhara Commentary on C.S.Su.22/18)

The action of the substance that facilitates or corrects the metabolism in the body thereby ensuring that the Ama (unprocessed or intermediary metabolites) are completely metabolized and excreted is known as Pachana. Here it doesn't activate Agni (Digestive fire) but only does the control of Ama (unprocessed or intermediary metabolites) by facilitating its proper metabolism and excretion. Here it is to be understood that the substance doesn't increase the craving for food or nutrition or energy but will be facilitating or enhance the ability to metabolise the substance taken into its end metabolite.

The knowledge of the Pachana effect on the digestive system is known by the ability to digest the food that is ingested. Similarly, the knowledge of Pachana effect on the level of metabolism is understood by the increase in the strength or fitness of the body.

Modern contemporary pharmacological action – Unlike Deepana, here the substance has to aid the process of digestion. The most common action that has been associated to this action by the authors of dravyaguna texts is the Digestives activity. It is defined as any agent or substance that helps in the process of digestion or even promotes it. As the process of metabolism or digestion in particular involves the process of chemical breakdown and re-synthesis, there is a large amount of biochemical reactions. In contemporary science (Modern science), the action to be commonly considered as Digestants. The action is defined as those substances that aid digestion in the GI tract or promote digestion. The most commonly used ones are hormones like pepsin, papain, pancreatin, etc.

Thus the Pachana action is understood in the following way:

a. System associated–mainly Digestive System
b. Panchamahabhuta responsible– Vayu & Agni Mahabhuta; Mainly Agni Mahabhuta

    तच्च वाय्वाग्निगुणभूयिष्म् । (Chakradatta)

    अग्रेस्तु गुणबाहुल्यात् पाचनं परिचक्ष्महे । (R.S.987)

c. Rasapanchaka responsible – Amla, Lavana or Katu Rasa; Teekshna, Ushna, Laghu, Sukshma, Khara and Vishada Guna; Ushna Veerya; Katu Vipaka
d. Contemporary pharmacological action – Digestive or Digestants
e. Examples – Nagakeshara (*Mesua ferrea* L.) and Musta (*Cyperus rotundus* L.)
f. Clinical Application – Clinically, Agni in Ayurveda assumes a very important role as it is strongly emphasized that every disease is caused due to Mandagni (Low digestion). Nutrition is the fuel of life as the is necessary for every cell in the body. The proper nutrition is only supplied when the sub-

stance that has good nutritional combination is properly digested, absorbed and then properly metabolised to form different metabolites. These metabolites are different ions or molecules that are used by the cells to carry out its functions. When there is hindrance in any of the process, then the formation of these end metabolites are delayed or doesn't result itself. This hampers the supply of the metabolites or nutrients (fuel of energy) to the cells resulting in cell malfunction or even death. Thus Pachana is to be considered to be taken in two levels namely one that exerts action on Jataragni while the other on the Bhutagni and Dhatwagni. The first being the digestant proper that aid in digestion but the second one that acts on Bhutagni and Dhatwagni is the one that aids the metabolism of nutrients or intermediary metabolites. It not only aids in the proper metabolism but also help these constituents to attain the state of end metabolite by-products thereby facilitating further process that helps in their excretion too.

g. Research Updates – Various researches pertaining to literary and experimental aspects are done on the action of Pachana. Some of them to be noted here are –

1. A research study on the effect of Pachana action along with Upavasa was done and published by Dr. Ami Rajani et.al. showed that both Upavasa with Pachana and without Pachana had a considerable effect in correcting the patients with loss of appetite. But the group with Pachana had a better percentage of patients than without Pachana owing to better effect.

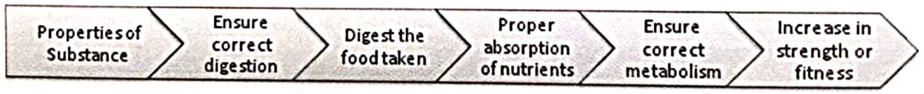

Figure No.4 Summarized presentation of Pachana Action

Deepana & Pachana-

Many of the Ayurvedic texts have either mentioned Deepana but only the later authors like Sharangadhara and Bhavaprakasha mentioned the two actions separately. Moreover, Sharangadhara emphasized the substances that exhibit both the effect by mentioning Chitraka (Plumbago zeylanica L.) as example. Other examples for this action is Musta (Cyperus rotundusL.), Katvanga (Oroxylumindicum (L) Kurz.), Amrita (Tinosporacordifolia (Willd.) Hook. f. and Thoms.), Bilva (Aegle marmelos (L.) Correa.), etc. Thus, it becomes apparent to mention this in the present context. The substances that are having the only action of Deepana are usually mild irritants like the aromatic oils which

result in the stimulation of secretions like gastric juice or bile or even the various enzymes in the cellular level. Similarly, the digestion or metabolism (cellular or intermediate) is done by the help of Pachana substances that have more influence. It may be enzymes as specified in allopathic system or those mentioned in the texts (Nagakesara) where the substances have the capacity to stimulate or even modify the environment that is conducive for easy metabolism. It involves the secretion of hormones, enzymes, proper functioning of receptors and generation or synthesis of metabolic intermediaries so as to metabolise the substance efficiently. Thus, a substance which is attributed with both the said activities, then the substance should be having the capacity of both stimulating the secretions and modifying the metabolic environment in different levels.

a. Research Updates – Various researches pertaining to literary and experimental aspects are done on the action of Deepana-Pachana. Some of them to be noted here are –

1. Accordingly, an experimental study on Chitraka with respect the action of Deepana and Pachana by Dr Ashok Kumar B. N. et. al. showed that it had a predominant effect of Pachana while the effect of Deepana was mild.

2. A review study on the dual action's applied aspect along with conceptual interpretation done by Vandana Singh et.al. showed that the Deepana dravyas are dominant with Laghu and Ushna guna while the Pachana dravyas are dominant with Ruksha and Ushna guna while the one that has both these actions will have Laghu, Ruksha and Ushan guna.

3. Another review study was done on the role of the Deepana-Pachana in Panchakarma by Dr. Krithika Thakur et.al. The study showed that the action will be useful in the mobilization of the Doshas thus helping in the proper evacuation of the vitiated Doshas from the body during the main therapeutic procedure.

These studies have showed the benefits of the action in the best possible manner along with the different interpretations too.

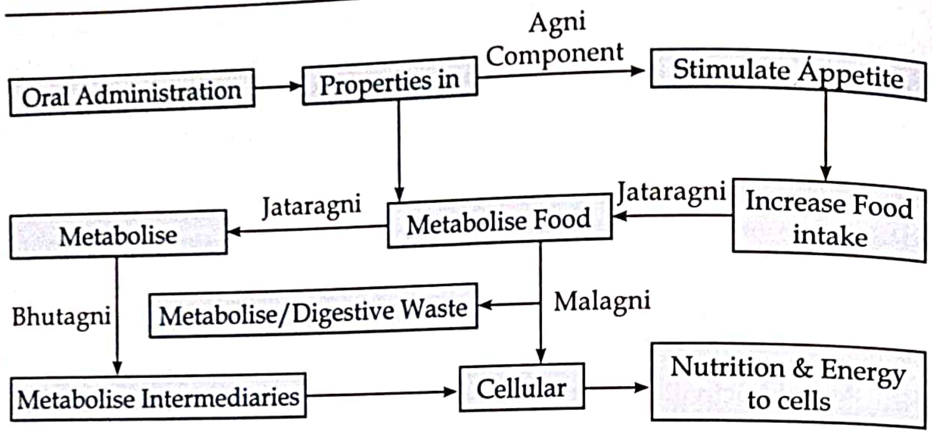

Figure No. 5 Summarized presentation of Deepana-Pachana Action

9.1.3. Samshodhana

Definition–

स्थानान्निष्कासानाद् वापि वहिराभ्यन्तराश्रयान् । समेत्य शोधयेत् दोषान्देहसंशोधनं च यत् ।। (K.N.Mishraka Varga 198)

स्थानाद्वहिर्नयेद्रूर्ध्वमधोवामलसंचयम्।देहसंशोधनंतत्स्याद्देवदालीफलंयथा।। (S.S.Pu.4/8)

यद्रव्यं स्थानाद्वहिः स्थानान्निरस्यूर्ध्वं वाऽधः मलसञ्चयं नयेत्तद्देहे संशोधनं स्यात् । (A.D.Adhamalla Commentary for S.S.Pu.4/8)

.....ऊर्ध्वं मुखनासिकाभ्यामधः पायुर्मेढ्रमार्गेण । देहग्रहणेन शोणितावसेन्वनमपि गृह्यते शोधनत्वात् । (A.D.Adhamalla Commentary for S.S.Pu.4/8)

The action Shodhana is defined as the ability of the substance to evacuate or remove the Mala from the body that are present in different regions of the body is known as Samshodhana. Depending on the process that is being applied for initiating the action, route of evacuation is used as the natural orifice is used in all the procedures except blood letting or Raktamokshana. Accordingly, the Mukha (Mouth) and Nasika (Nose) are used for Urdhwa samshodhana (evacuation from the upper parts of the body) while Payu (Rectum & Anus) and Medra (Penis or Vagina) are used for Adha samshodhana (evacuation from the lower parts of the body).

The action is also known as Shodhana and is generally noted as synonymous for the Panchakarma therapy. But Samshodhana or Shodhana is much more than just Panchakarma therapy.

यतः शोधनं द्विविधमाचक्षते वहिराश्रयमभ्यन्तराश्रयं च । तत्र वहिराश्रयं शस्त्रक्षाराग्निप्रलेपादयः ।

अभ्यन्तराश्रयं तु चतुः प्रकारं वमनं रेचनास्थापनशोणितमोक्षणं च । एके शिरोविरेचनं मन्यन्ते ।। (A.D.Adhamalla Commentary for S.S.Pu.4/8)

The action Shodhana is classified as two types namely External and Internal. The external action of Shodhana is obtained by various procedures like Shastrakarma (Surgery), Ksharakarma (Alkali cauterization), Agnikarma (Cauterization), Pralepa (Applications), etc that bring about the removal of the Mala (Unwanted matter) from the region. The internal action of Shodhana is obtained by the five procedures namely Vamana (Therapeutic emesis), Virechana (Therapeutic purgation), Asthapana (Medicated decoction based enema), Raktamokshana (Blood letting) and Nasya (Nasal errhines) which remove the Mala (Unwanted matter) from the body internally through the natural orifices.

यदीरयेद्वहिर्दोषान् पञ्चधा शोधनं च तत् । निरुहो वमनं कायशिरोरेकोऽस्रविस्रुतिः ।। (A.S.Su.14/5)

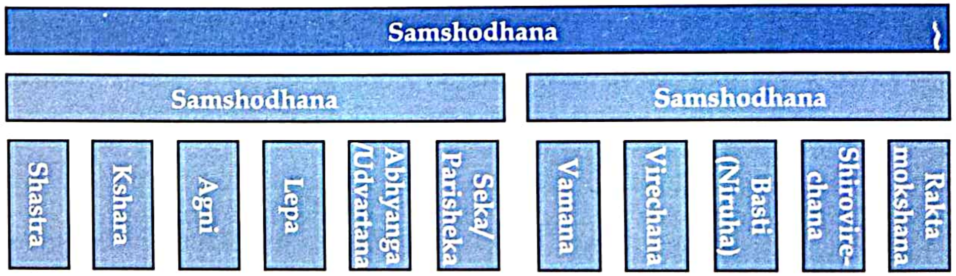

Figure No. 6 Classification of Samshodhana action

The detailed mode of action with respect to Vamana and Virechana is described in the text Charaka Samhita while the activity of Shirovirechana is discussed by Vagbhata. The action of Basti and Raktamokshana is dependent on the type of treatment that is indicated to the person. Thus, depending on the individual and need, the instruments, composition, etc varies to a large extent. Hence, the details of Basti and Raktamokshana is not explained here which will be done in Panchakarma subject. The details of the modality of these actions are as described below:

Vamana & Virechana –

तत्रोष्ण-तीक्ष्ण-सूक्ष्म-व्यवायि-विकासीन्यौषधानि स्ववीर्येण हृदयमुपेत्य धमनीरनुसृत्य स्थूलाणुस्रोतोभ्यः केवलं शरीरगतं दोषसंघातमाग्नेयत्वाद् विष्यन्दयन्ति, तैक्ष्ण्याद् विच्छिन्दन्ति विच्छिन्नः परिप्लवन् स्नेहभाविते काये स्नेहाक्तभाजनस्थमिव क्षौद्रमसज्जन्नणुप्रवणभावादामाशयमागम्योदानप्रणुन्नोऽग्निवाय्वात्मकत्वादूर्ध्वभाग प्रभावा दौषधस्योर्ध्वमुत्क्षिप्यते सलिलपृथिव्यात्मकत्वादधोभागप्रभावाच्चौषधस्याधः प्रवर्तते उभयतश्चोभयगुणत्वात् । इति लक्षणोद्देशः ।। (C.S.Ka.1/5)

तत्रोष्णतीक्ष्णसूक्ष्मव्यवायिविकाषीव्यौषधानि स्ववीर्येण हृदयमुपेत्य सौक्ष्म्यव्यवायित्वाच्च धमनीरनुसृत्य स्नेहेन मृद्वकृत्यान्तःशरिरेस्वोष्मणाऽऽर्द्रदारुवद्विष्यन्नै स्थूलाणुस्त्रोतोभ्यः सकलमपि दोष संघातमौष्ण्यात्पुनर्विष्यन्दयन्ति । तैक्ष्णयाद्विकाषित्वाच्च विच्छिन्दन्ति । स विष्यन्नविच्छिन्नो दोषसंघातः पारिप्लवः स्नेहाक्तभाजनस्थिवोदकांजलि रसज्जत्रणुस्रवणभावादामाशयमागम्योदानप्रणुन्नोऽग्निवाय्यात् मकत्वादूर्ध्वभागप्रभावाच्चौषधस्योर्ध्वं प्रवर्तते । सलिलपृथिव्यात्मकत्वादधोभागप्रभावाच्चौषधस्याधः । उभयतश्चोभयगुणात्मकत्वादुभयभाग प्रभावाच्च ।। (A.S.Su.27/4)

The substances that are used for Vamana (Therapeutic emesis) and Virechana (Therapeutic purgation) should possess the properties namely Ushna, Teekshna, Sukshma, Vyavayi and Vikasi. These substances will enter the Hridaya by virtue of these qualities especially Sukshma it gets into the minute vessels by spreading all over the body through the Dhamani. Then due to the Ushna property, the substance will cause the Doshavilayana (Liquification or breaking of the vitiated Dosha complex). This process is aided by the Teekshna property as it will facilitate penetration into the complex by the substance. As a result the of the process the liquified and separated Dosha will move all over the body. But these will not be able to stick at a point because of the Snehana (Oleation) procedure that is done as a pre-operative procedure. The Doshas thus slip into the Amashaya (Stomach) which is expelled out through the oral cavity if the drug is given for Vamana. This is possible due to the Agni and Vayu Mahabhuta dominance along with Urdhvabhagahara Prabhava property of the substance. Similarly, the Doshas are expelled out through the anus if the drug is given for Virechana. This is possible due to the Jala and Prithvi Mahabhuta dominance along with Adhobhagahara Prabhava property of the substance. But some which have both the Prabhava property, then such substances can be used in both the ways too.

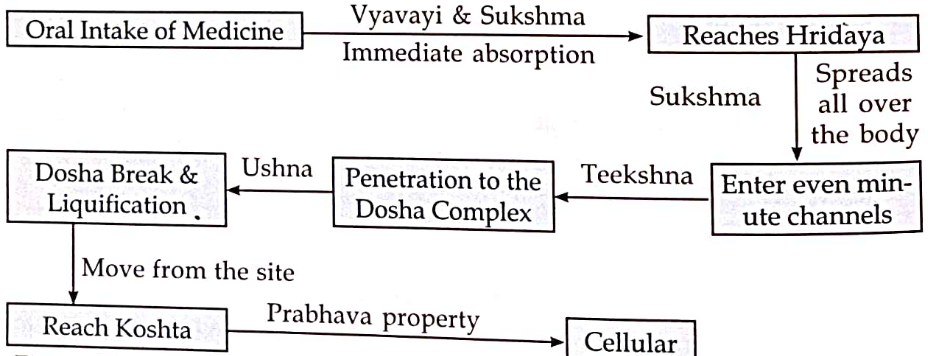

Figure No.7 Summarized Pharmacodynamics of Shodhana (Vamana & Virechana) Action

The pharmacokinetics of Vamana action is explained in Astanga Sangraha as below:

पीतवानूरुन्यस्तभुजो वमनानुगतमानसोभुजो वमनानुगतमानसोग्नितप्तैः पाणिभिरुपतप्तमानोमुहूर्त मनुपालयेत् । स यदा जानीयात् स्वेदप्रादुर्भावेन दोषं प्रविलयमापद्यमानं रोमहर्षेण वा स्थानभ्यः प्रविचलितं कुक्ष्याध्मानेन च कुक्षिमनुसृतं क्रमात् हृदयोपमदंहृल्लासास्यस्रवणैश्चोर्द्ध्वमभिमुखीभूतं समुपस्थितानेकप्रतिग्राहः पार्श्वललातोपग्रहेण नाभिप्रपीडनेन पृष्ठ प्रतिलोममर्दन च प्रवृत्तव्यपत्राणीयपुरुषो विवृतोष्ठतालुकण्ठो नातिमहता व्यायामेन वेगानुदीरयन्नप्रवृत्तान् प्रवर्तयन् प्रवृत्तांश्चानुवर्तयन् सुपरिलिखितनखाभ्यामङ्लीभ्यामुत्पल कुमुदैरण्डनालैर्वा कण्ठमभिस्पृशन् वमेन्नात्युग्रतो नात्यवनतः पार्श्वप्रवृतो वा ।। (A.S.Su.27/15)

Accordingly, the text give an idea of the pharmacokinetics here. Whenever the drug is administered orally, the individual has to focus on the process. After a period of 1 Muhurta (45 minutes), there will sweating which denotes that the Doshas are being liquified. The sweating is followed by horripilation which denotes that the Doshas have started to moving and have become unstable. This is followed by the distention of abdomen which indicates that the Doshas have come to the Koshta. Then the symptoms like tightening of chest, nausea, salivary secretion is indicative that the Doshas have started to move towards the oral cavity. The process can be aided by slightly rubbing the back of the patient from bottom to top. The explanation gives an idea as to how our body responds to the substance which is having the action of Vamana.

It is to be noted that the same happens with respect to Virechana but the only change is the last step after the Doshas have come to the Koshta. Then the symptoms are that there is distention of abdomen followed by the urge to pass stools.

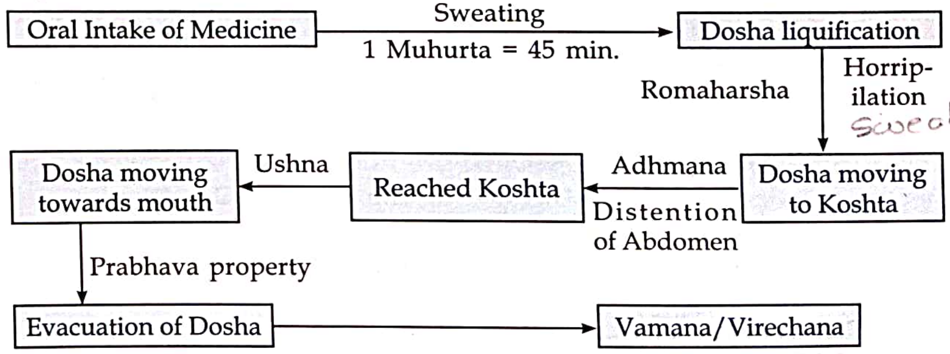

Figure No.8 Summarized Pharmacokinetics of Shodhana (Vamana & Virechana) Action

Nasya -

नासा हि शिरसो द्वारम् तत्रावसेचितमौषधं स्रोतः श्रृंगाटकं प्रप्य व्याप्य मूर्द्धानं नेत्रश्रोत्रकण्ठादिसिरामुखानि च मुञ्जादिषीकामिवासक्तामूर्ध्वजत्रुगतां वैकारिकीमशेषामाशु दोष संहतिमुत्तमांगदापकर्षति ।। (A.S.Su. 29/3)

The nose is considered as the gateway to the head and hence the drug when administered through the nasal route will reach a point known as Shringataka in the head by virtue of its sukma and teekshna properties. This point is the region of intersection between the channels of head. Hence now from here the medicament spreads all over the head and face namely the eye, ear and throat. Then it enters into the head through the Sira and penetrate and remove the Doshic complex immediately.

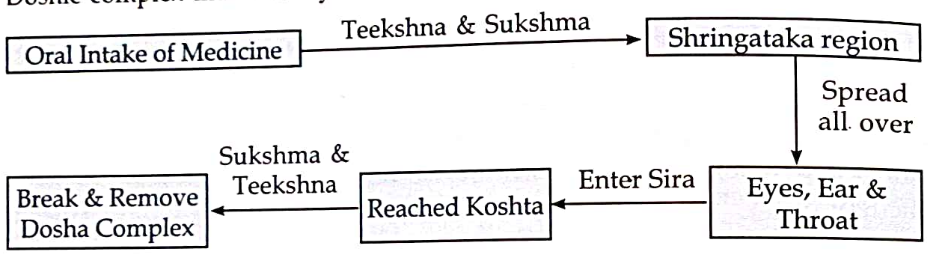

Figure No.9 Summarized representation of Nasya Action

Modern contemporary pharmacological action - The action even though is enumerated as one is having different actions in it. It is the complete set of treatment that is usually called as the 'PANCHAKARMA'. As mentioned earlier it envisages five actions that are commonly used for biopurifiation of the body. These are equated to Emetics, Purgatives, Enema, Blood-letting and Nasal errhines as their equivalent to these five therapeutic actions. Other than these, the external applications like the Massage, applications of different pharmaceutical or cosmetic formulations are also to be considered here.

Thus the Samshodhana action is understood in the following way:

a. System associated-mainly Digestive System, Skin and Circulatory system but overall effect on the whole body too.

b. Panchamahabhuta responsible- Prithvi & Jala (Virechana), Vayu & Agni (Vamana),

c. Rasapanchaka responsible - Katu, Tikta, Kashaya Rasa; Ushna, Teekshna, Sukshma, Vyavayi, Vikasi Guna; Ushna Veerya; Urdhva/Adhobhagahara Prabhava.

d. Contemporary pharmacological action - Multiple actions

e. Examples - Devadali (*Luffa echinata* Roxb.), Madanaphala (*Randia dumetorum* (Retz.) Poir.)

f. Clinical Application - Application of Samshodhana action is basically used in cases when there is maximum vitiation of the Doshas and it becomes apparent for its evacuation through an invasive method. As it is considered to be one of the powerful lines of treatment, the use of the medicines that have the ability to produce the action should be used very judiciously else it may lead to complications that are very serious or even irreversible. Generally, Shodhana is called as 'Panchakarma' but as per the Adhamalla commentary, even Shastrakarma, ksharakarma and Agnikarma is also to be regarded as Shodhanakarma. Along with that the lepana karma for treatment of diseases like Vidradi that have Shodhana effect is also to be considered under this activity itself. A proper evaluation of the disease and the diseased is useful in selecting the medicament and its method of administration to give the desired benefit is necessary.

g. Research Updates - Various researches pertaining to literary and experimental aspects are done on the action of Samshodhana with main focus on the process of Panchakarma itself. Some of them to be noted here are -

   1. A detailed article on the physiological and biochemical changes that happen during and after the Vamana karma which is a type of Samshodhana was reviewed and analysed by Dr. Bharti Gupta et. al. showed that the procedure improved the appetite, sleep pattern and also regulated the bowel system physiologically. Biochemically, it was noted that there was a mild decrease in the levels of Lipids and cholesterol.

   2. A brief review of Panchakarma (Samshodhana) by Dr. Bhojraj A Chaudhari et. al. has highlighted that Panchakarma is a shodhana regimen and not a single procedure. It starts from the Snehana and Swedana which ends with Samsarjana karma which is indicated both for healthy and selected diseased conditions.

These studies show that Samshodhana karma is a way when applied judiciously is useful in maintaining the vital and biochemical parameters of the body which is most necessary for the maintenance of health and prevent diseases.

9.1.4. Samshamana

Definition-

न शोधयति न द्वेष्टि समान् दोषांस्तथोद्धतान् । समीकरोति विषमान् शमनं तद्यथाऽमृता । (S.S.Pu.4/2)

न शोधयति यद्दोषान् समान्नोदीरत्यपि । समीकरोति च कृद्धान् तत् संशमनमुच्यते ।। (K.N.Mishrakavarga 193)

न शोधयति यद्दोषन्समान्नोदीरयत्यपि । समीकरोति विषमाच्छमनं तद्यथाऽमृता ।। (B.N.6/214)

न शोधयति यद्दोषान् समान्नोदीरयत्यपि । समीकरोति विषमान् शमनं तच्च सप्तधा ।।

पाचनं दीपनं क्षुतृड्व्यायामातप मारुताः । (A.H.Su. 14/6-7)

संशमनं नाम यद्दोषं दोषग्रहणगृहीतं च व्याधिं संशोधन विना क्षपयति समं च नोदीरयति । (Chakrapani Commentary on S.S.Su.39/7)

The action of the substance that is attributed with the pacification of the Dosha without expulsion but control the vitiation is known as Samshamana. These class of substances tries to bring the condition of the Doshas into a state of equipoise or hemostasis so that the related diseases are pacified or even cured. The process of pacifying the Dosha should not be the one that leads to the depression of the Dosha, instead it should control the vitiation and bring them to the state of homeostasis.

The action in the process deals with different systems of the body in a well co-ordinated manner leading to the action to manifest and provide with the desired effect. It is to be understood that every disease is caused by the 3 Doshas which in its normal condition maintain a state of equilibrium or hemostasis. This condition of equilibrium or hemostasis even though are different to every individuals as it depends on the Prakriti if the individual, the Vikriti condition of the Doshas are the same. But it is also to be noted that the action of the substance depends not only on the Vikriti but also on the individual's Prakriti to undergo the expected biochemical interactions or action in particular. Every Dosha is designated with a set of properties where any substance that has the similar or near to similar properties will tend to increase it while those which have the opposite will tend to decrease them. This principle is based on the concept of Samanya and vishesha. Basically, the concept explains three types of change namely physical (Dravya), property (Guna) and functionality (Karma). Except in case of Vata Dosha which exhibits only two types of change as it has no physical (Dravya) existence, the rest two Doshas will exhibit all the 3 types of changes.

It is also to be noted that the Doshas are not just restricted to one component or system of the body but are a set of those components in the body that have a similar functionality. Hence, it is consists of enzymes, receptors, biochemicals, hormones, etc. It is also important to note that the difference between the Vata Dosha and others is due to the composition of these three Doshas.

Thus, a drug with the Samshamana activity should have the ability to pacify

the vitiated Dosha inline with the Prakriti of the individual. Based on the Dosha involved, it is of 3 types namely:

1. Vatashamana
2. Pittashamana
3. Kaphashamana.

Vatasamshamana-

तस्यावजयनं-स्नेहस्वेदौ विधियुक्तौ, मृदूनि च संशोधनानि स्नेहोष्णमधुराम्ललवणयुक्तानि । (C.S.Vi.6/16)

वातस्योपक्रमः स्नेहः स्वेद संशोधनं मृदु । स्वाद्वम्ललवणोष्णानि भोज्यन्यभ्यङ्गमर्दनम् ।। (A.Hr.Su.13/1)

The substances that are useful in the pacification of Vata Dosha are known as Vatasamshamana where the properties antagonist to those of the Vata Dosha are being used to achieve the desired effect of Vatashamana. To achieve this objective of pacifying Vata Dosha, the properties that are useful should be opposite to that of Vata Dosha namely, Ruksha (Dry), Laghu (Light), Sheeta (Cold), Khara (Rough), Sukshma (Minute) and Chala (Mobile) as per the principle of Samanya-Vishesha. Hence the substances with the properties Snigdha (Moist), Guru (Heavy), Ushna (Hot), Shlakshna (Smooth), Sthula (Large) and Sthira (Immobile) are useful. But as earlier mentioned, the Vriddhi or vitiation of the Vatadosha is only through Guna (property) and Karma (Functional) where the said property is said to be useful. The Rasa namely Madhura, Amla and Lavana are the one that can control the Vatadosha while Ushna Veerya and Madhura or Amla Vipaka are also responsible to the action.

Properties	Favourable to Vata Dosha	Unfavourable to Vata Dosha
Rasa	Katu, Tikta & Kashaya	Madhura, Amla & Lavana
Guna	Ruksha, Laghu, Sheeta, Khara, Sukshma & Chala/Sara	Snigdha, Guru, Ushna, Shlakshna, Sthula & Sthira
Veerya	Sheeta	Ushna
Vipaka	Katu	Madhura & Amla

Other than these two types of vitiation namely functional and property, there is another condition namely Avarna of Vatadosha where the samshamana of the condition becomes complicated. This is due to the fact that the movement of Vatadosha is blocked by other bodily components where this general rule will not be applicable. In such cases the treatment is planned according to the presenting condition and the cause of blockage.

Pittasamshamana –

तस्यावजयनं –सर्पिष्पानं सर्पिषा च स्नेहनमधश्च दोषहरणं मधुरतिक्तकषायशीतानां चौषधाभ्यवहार्याणामुपयोगः मृदुमधुरसुरभिशीतहृद्यानां गन्धानां चोपसेवा .... । (C.S.Vi.6/17)

पित्तस्य सर्पिषः पानं स्वादुशीतैर्विरेचनम् । स्वादुतिक्तकषायाणि भोजनान्यौषधानि च ।। (A.Hr.Su.13/4)

The substances that are responsible for the pacification of Pitta Dosha is known as Pittasamshamana. These substances are supposed to have those properties that are antagonist to that of Pitta Dosha. The properties of Pittadosha are Sneha (Moist), Teekshna (Penetrative), Ushna (Hot), Laghu (Light), Visragandha (Fleshy odour), Sara (Mobile) and Drava (Fluid). Hence, the opposite qualities namely Mridu (Soft), Sheeta (Cold), Guru (Heavy), Sugandha (aromatic odour), Sthira (stable) and Sandra (Viscous). The vitiation being through three ways namely Dravya (Physical), Guna (Property) and Karma (Functional) where the said properties are said to be useful. The Rasa namely Kashaya, Tikta and Madhura are the one that control Pittadosha while Sheeta Veerya and Madhura Vipaka are also responsible to the action.

Properties	Favourable to Vata Dosha	Unfavourable to Vata Dosha
Rasa	Amla, Lavana & Katu	Madhura, Tikta & Kashaya
Guna	Teekshna, Ushna, Ruksha, Sara, Laghu and Drava	Mridu, Snigdha, Guru, Sheeta, Manda, Sthula & Sandra
Veerya	Ushna	Sheeta
Vipaka	Katu& Amla	Madhura

It is to be noted that the Pittadosha which is normally having Snigdha guna attains the Ruksha guna when it gets vitiated and is not associated with Ama. Hence, the Snigdha guna is useful in the control of Pittadosha after its association with Ama is lost.

Kaphasamshamana –

तस्यावजयनं –विधियुक्तानि तीक्ष्णोष्णानि संशोधनानि रूक्षप्रयाणि चाभ्यवहार्याणि कटुकतिक्तकषायोपहितानि .... । (C.S.Vi.6/18)

श्लेष्मणो विधिना युक्तं तीक्ष्णं वमनरेचनम् । अन्नं रूक्षाल्पतीक्ष्णोष्णं कटुतिक्तकषायकम् ।। (A.Hr. Su.13/10)

The substances that are useful in the pacification of Kapha Dosha are known as Kaphasamshamana where the properties antagonist to those of the Kapha Dosha are being used to achieve the desired effect of Kaphashamana. To achieve this objective of pacifying Kapha Dosha, the properties that are useful should be opposite to that of Kapha Dosha namely, Snigdha (Moist), Sheeta (Cold), Guru (Heavy), Manda (Sluggish), Shlakshna (Smooth), Mritsna (Soft) and Sthira (Stable)as per the principle of Samanya-Vishesha. Hence the substances with the properties Ruksha (dry), Laghu (Light), Ushna (Hot), Teekshna (Sharp), Khara (Rough) and Sara/chala (Mobile) are useful. But as earlier mentioned, the Vriddhi or vitiation of the Kaphadoshain terms of Dravya (Physical), Guna (Property) and Karma (Functional) where the said property is said to be useful. The Rasa namely Katu, Tikta and Kashaya are the one that can control the Kaphadosha while Ushna Veerya and Katu Vipaka is also responsibleto the action.

Properties	Favourable to Vata Dosha	Unfavourable to Vata Dosha
Rasa	Madhura, Amla & Lavana	Katu, Tikta & Kashaya
Guna	Snigdha, Guru, Sheeta, Shlakshna, Manda, Mridu & Sthira	Ruksha, Laghu, Ushna, Khara, Teekshna, Kathina & Chala/Sara
Veerya	Sheeta	Ushna
Vipaka	Madhura & Amla	Katu

It is to be noted that the Kaphadosha is the one that gets vilayana (Spreading) after getting vitiated only due to Ushna (Hot) property. It is due to the fact that the Kapha gets solidified or bound due to Sheeta Guna while the Ushna Guna will make it expand leading to the spread of the Dosha.

Modern contemporary pharmacological action – As such there is no clear activity of contemporary science to explain this action. In fact all the pharmacological action that are mentined to various diseases that help in the control or bring down the effect of the causitive factor of the related disease can be taken as Samshamana itself.

As per the author of Aushadha Karma Vignyana, the Depression and Sedative action are mentioned to be equivalent to Samshamana action. But restricting to this action,

Thus the Samshamana action is understood in the following way:

a. System associated–Primarily on the main system within the body to which the substance is administered related to the disease condition, secondarily on the whole body.

b. Panchamahabhuta responsible–Mainly Akasha Mahabhuta along with others. Nagarjuna has considered the action to be the effect of Vayu, Jala and Prithvi Mahabhuta.

आकाशगुण भूयिष्ठं संशमनम् । (S.S.Su.41/6)

c. Rasapanchaka responsible– Mainly Tikta Rasa; Laghu, Ruksha Guna; Ushna Veerya; Katu Vipaka

d. Contemporary pharmacological action – Multiple actions as per the system involved.

e. Examples – Guduchi (*Tinospora cordifolia* (Willd.) Hook. f. & Thoms.), Eranda (Roots of *Ricinus communis* L.), Chandana (*Santalum album* L), Maricha (*Piper nigrum* L), etc

f. Clinical Application – The action that is most commonly used in a clinical practice is Samshamana. It is the basic action that acts as the foundation to the manifestation of other actions. A substance with the relevant samshamana action will lead to the control of the causitive Dosha with respect to the disease. Further it helps in the control or repair of the root cause pertaining to the disease namely the Dosha. A judicial application of the action will also lead to the slowing of the disease pathology where the relevant medications that are targeted to the disease or its symptoms gets the time and support for their actions. At times if the disease is not completely manifested, the same medication will be enough to control and cure of the disease. It is to the noted here that the substance that is used for pacifying the Dosha should be given judiciously owing to proper analysis of the Dosha as they have the ability to increase the opposite qualities which has to be avoided. Some of the examples of Samshamana substances are as below:

Vata Samshamana	Pitta Samshamana	Kapha Samshamana
Badara	Draksha	Maricha
Tilataila	Ghrita	Madhu
Bala	Vasa	Talisapatra

g. Research Updates– The actions that are not coming under the list of Samshodhana is to be taken as Samshamana. Hence any action other than the one that expels the Dosha is to be taken as Samshamana itself. For example, Jwarahara, Kasahara, Shwasahara are all coming under Samshamana activity itself. Thus, there will be no research study as such on the action of Samshamana but on the actions that are focused on certain disease conditions as exemplified. Some of them to be noted here are –

1. A study on the Samshodhana and Samshamana line of treatment was done with respect to Mandala kushta by Dr. Gunjan Mangal et.al. showed that samshamana treatments that had been used here is the Deepana, Pachana actions along with the drugs having Kushtahara action. Here the three actions namely Kushtahara, Deepana and Pachana are those taken as parts of Samshamana action itself.

Many such studies can be included in the list as examples because all actions that are not having the expulsion effect is taken as Samshamana itself. Thus, all studies that are oriented towards the curative effects like Analgesic, Anti-inflammatory, etc. of a given disease condition can be taken here.

9.1.5. Anulomana

Definition –

कृत्वा पाकं मलानां यद्भित्वा बन्धमधो नयेत् । तच्चानुलोमनं ज्ञेयं यथा प्रोक्ता हरीतकी । (S.S.Pu.4/3)

सरोऽनुलोमनः प्रोक्तः । (S.S.Su.46/525)

अनुलोमनो वातमलप्रवर्तनः । (Dalhana Commentary)

The ability of the substance to metabolise the Mala (byproducts of metabolism) into their natural end metabolites by forming the natural conjugates and expel them through the natural pathway of excreation is known as Anulomana. The action is exemplified with the medicinal substance named Haritaki (*Terminalia chebula Retz.*).

The action is attributed to the property Sara by Sushruta which is explained as the one that aids in the movement of Vata (Apanavata) and Mala (Natural byproducts of metabolism).

यद्द्रव्यं मलानां दोषाणां पाकं कोपशान्तिं कृत्वा बन्धं विबन्धं च भित्वा भिन्नतां नीत्वाधोनयेतधः करोति वातादिकमिति शेषः तेन प्रतिलोमादनुलोमं करोतीत्यर्थः तच्चानुलोमनं ज्ञेयम् । (Adhamalla Commentary on S.S.Pu.4/3)

The word Anulomana refers to the direction that the body hairs point out. As majoirty of them point downwards, the default direction of Anulomana is understood as the downward direction itself. But as in some parts like ears, head, etc., there is change in the direction, the same is considered as Anulomana itself. Here the clarity on the action is given by Adhamalla where it is said that Anulomana action will result in the metabolism of both Dosha and Mala simultaneously. Here the metabolism results in dissociation of the substances and the Dosha where the resulting byproducts are again conjugated and made less toxic leading to proper formation of the Mala. This Mala is further expelled out in the form of Vata (Apana vata), Pureesha (Poop) and Mutra (Urine) which are the main excretory products in the body. Other than these three there are other excretory products like Kha-mala, Sweda and even Nishwasa which are also prominent ways of excretion but comparatively are less in quantity. Thus Anulomana even though is mentioned as the process

that will result in the excretion through downward (Adho) routes, other routes of excretion that are normal physiologically are also to be understood.

अनुलोमनं वातादीनामधः प्रवर्तनं सरगुणत्वात् यथा हरीतकी । सैवानुलोमनी प्रसिद्धैव वन्धमिति दोषाणां परस्पर ग्रथितत्वमेके वातमूत्रपुरीषादी नामप्रवृत्तिरूपं विविधमाहुः । (Adhamalla commentary on S.S.Pu.4/3)

Further the explanation on Anulomana by Adhamalla explain that it is a process that also binds the Dosha with the different Mala (Bye products of Metabolism) such that it can be properly excreted from the body.

The combination of the Dosha to be excreted with the Vata (Apana vata), Mutra and Pureesha is necessary to maintain the hemostasis of the body. Hence their conjugation with the Apana vata, mutra and Annamala will lead to proper excretion of Vata, Pitta and Kapha Dosha and avoid them from being vitiated. It is also to be noted, that this action is also considered as a sub-action of Virechana (therapeutic purgation) which is a type of Samshodhana itself.

Modern contemporary pharmacological action – The most common action that has been associated is the Carminative activity. But other actions like Aperients are also having the similar effects and is found to be much nearer to the description of Anulomana. An aperient is defined as those class of substances that aid in the process of digestion, increase the bowel movements and as a result prevent the condition of constipation. These are also known as mild laxatives or even osmotic laxatives which aid in softening of the stools or poops leading to easy excretion. The carminative action is on the other hand perform the action of expelling the gas and remove flatulatance or even relieve colic pain. Here that action further aids in the increase of peristaltic movement of intestines leading to gastric emptying. Hence the action is also seen to produce mechanical digestion, expulsion of gases and excretion of the byproducts.

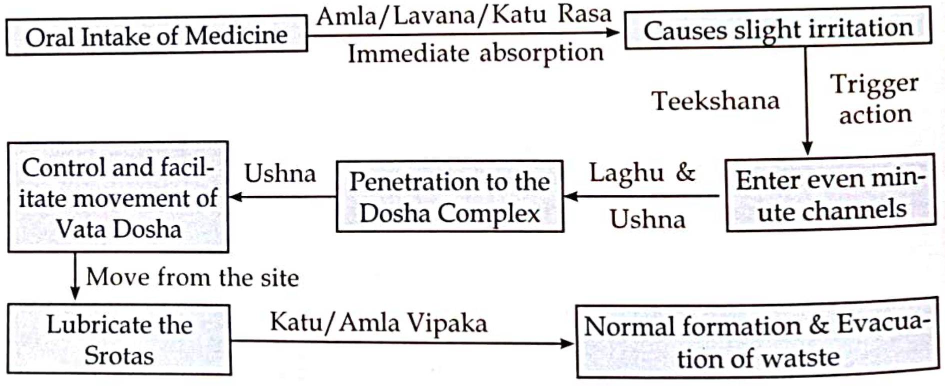

Figure No.10 Summarized Pharmacodynamics of Anulomana Action

Thus the Anulomana action is understood in the following way:

a. System associated–mainly Digestive System

b. Panchamahabhuta responsible–Jala & Prithvi Mahabhuta; Mainly Jala Mahabhuta

c. Rasapanchaka responsible – Amla, Lavana or Katu Rasa; Snigdha, Teekshna andLaghu Guna; Ushna Veerya; Katu Vipaka

d. Contemporary pharmacological action – Carminative or Aperient

e. Examples – Nimbuka (*Citrus acida* Roxb.), Hingu (*Ferula narthex* Boiss.) and Hareetaki (*Terminalia chebula* Retz.)

f. Clinical Application – Clinically, this action is one of the most sought one compared to other actions that form the sub-type of Virechana mentioned by Sharangadhara. This is due to the nature of this action being very mild in its manifestation will be useful not only in giving a relief to the patient but also allows the individual to continue the routine activities unhindered. As a result it makes the most preferred action to be used by practitioners for a Shodhana purpose or relieve the condition like Constipation. It is to be noted that while explaining the action, three Rasa namely Amla, Lavana and Katu is mentioned. Here the Amla Rasa which is by default has the anulomana action along with the Deepana and Pachana action also. Hence, those who need lubrication along with anulomana action, Amla rasa substances are much useful. When there is indigestion along with loss of appetite which has led to the condition of Vishtambha, then Katu rasa dravya like Hingu are much useful. But in either case, care should be taken that it doesn't disturb Pittadosha as they are irritants by nature. Some substances like Hareetaki which produce anulomana by the property of Prabhava are very much sought as they perform the action without any hindrance and also have less chances of producing any untoward effect.

g. Research Updates– Various researches pertaining to literary and experimental aspects that are done onAnulomana are being reviewed and some of them to be listed here –

1. A comparative experimental study of Hareetaki and Trivrit as both are examples of Anulomana and Rechana respectively was studied for the difference in the effect by Dr. Nidhin P S et.al. The study showed that the effect of Hareetaki was slower than Trivrit in exhibiting the laxative action comparatively.

2. An exploratory study to assess the effect of Anulomana and Rechana by Dr. Nidhin P.S. showed thatthe pureesha (Poops) where not properly formed when getting excreted due to both the actions. Instead both the

actions produced stools that fell into the 7th category when measured under the Bristol Stool Scale. The only difference in the two actions was that the latency where the Anuloma showed increased latency than Rechana.

The study has explained the method through which we can analyse the activity and differentiate the two actions that are sub activities of Virechana as per Sharangadhara.

9.1.6. Sramsana

Definition-

पक्तव्यं यदपक्वैव श्लिष्टं कोष्ठे मलादिकम् । नयत्याधः स्रंसनं तद्यथा स्यात्कृतमालकः । (S.S.Pu.4/4)

अविधायैव यत्पाकं सविबन्धं मलं तथा । स्थितं नयत्यधस्तात्तत् स्रंसनं परिकीर्तितम् ।। (K.N.Mishraka-varga 194)

The action of the substance that performs forcible evacuation of the the Mala (byproducts of metabolism) which may be either properly or improperly formed through the natural pathway of excretion is known as Sramsana. As the most predominant pathway of excretion is either through the GI tract or the urinary system, the word "Adaha" has been mentioned to denote the same. The word Sramsana is referred as the one that cause a fall and here the action is the one that cause all the components to fall or evacuate forcibly by causing the necessary irritation to the surfaces of the srotas or channels. This irritation will cause the forcible removal of those sticking on the surface or even relief of blocks that have prevented the passage. Finally, all these are collected and expelled through stools or urine in a very forcible way is known as Sramsana. Hence, it is also known by the name Virechana by the commentators of the classical texts like Chakrapani and Yogendranath. Sharangadhara has also considered it to be a subtype of Virechana karma itself. The main dosha that is affected by this treatment is the Pittadosha or Pitta and Kaphadosha as per the explanation in the book Charaka Samhita.

पित्तं वा कफपित्तं वा पित्ताशयगतं हरेत् । स्रंसनं ....।। (C.S.Ch.3/171)

The reference also shows that the Pitta and Kapha dosha that are bye products of the Rakta and Rasa Dhatu respectively are eliminated out through the action of Sramsana. This shows that the action is not limited to the GI tract but to all parts of the body especially the Rasa and the Rakta Dhatu along with the Doshas present in the Pittashaya (Gall bladder).

Modern contemporary pharmacological action – The most common action that has been associated is the Laxative activity. Generally, laxative are those substances that increase the bulk of the stools by loosening them and aid in their excretion by increasing the bowel movements. But the laxative action is of different types depending on the mechanism through which they exert their action. These types are Osmotic laxatives, Bulk promoting laxatives, Lubricant agents, Prokinetic laxatives, Stimulant laxatives, Surface active agents, etc. Among these types the Surface active agents, Stimulant laxatives and Prokinetic agents are having a similar methodology of action as explained in the classical texts.

Surface active agents are those which lower the surface tension of the stools leading to the increase in water and fat absorption. This activity will lead to the softening of the stools along with the increase in bulk which stimulates the GI tract resulting in excretion.

Stimulant laxatives are those which act by stimulating the colon mucosa so that there is secretion of water and electrolytes into the lumen. This will lead to absorption of the water into the stools making them increase in bulk which stimulates the GI tract resulting in excretion.

Finally, the Prokinetic agents are those substances that work on the neurons that release acetylcholine and mucosal secretions. The release of mucous will lead to absorption of the same by stools making them bulky that stimulates the GI tract resulting in excretion.

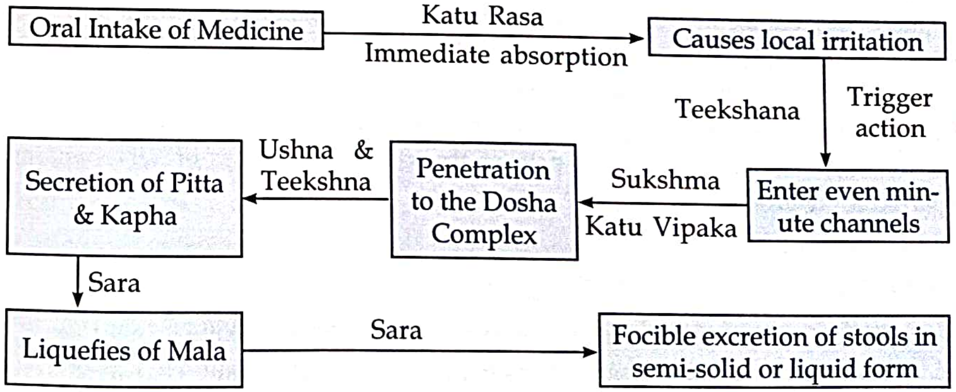

Figure No.11 Summarized Pharmacodynamics of SramsanaAction

Thus the Sramsana action is understood in the following way:

a. System associated-mainly GI Tract.
b. Panchamahabhuta responsible-Jala & Prithvi Mahabhuta;
c. Rasapanchaka responsible -Katu Rasa; Laghu, Teekshna, Sukshma and Sara Guna; Ushna Veerya; Katu Vipaka
d. Contemporary pharmacological action – Stimulant laxative, Surface active agents & Prokinetic agents.
e. Examples – Kritamala (*Cassia fistula* Linn.) and Sonamukhi (*Cassia angustifolia* M Vahl)
f. Clinical Application– Clinical application of the laxatives are mainly to relieve the condition of constipated bowel. The substances which have this action especially those which are equated to Sramsana are more powerful in their execution compared to Anulomana. Hence, the use of these should be in a very judicious way. Any amount of abuse or irrational or illogical use may cause unwanted or possible adverse effects. Even though the action of the substance is due to Jala and Prithvi Mahabhuta basically, the irrational use may cause the increase of the stimulation and loss of fluids in the body owing to the condition of dehydration. Thus, these substances have to be given strictly under the supervision of a qualified practitioner.
h. Research Updates – Various researches pertaining to literary and experimental aspects that are done on Sramsana are being reviewed and some of them to be listed here –
    1. A detailed review of all types of Virechana karma done by Dr. Nimmy V S et. al. included the action of Sramsana along with Anulomana, Bhedana and Rechana. Here the paper has considered emollient laxatives which is nothing but the Surface active agents as mentioned in the description.

The study has explained the method through which we can analyse the activity and differentiate the two actions that are sub activities of Virechana as per Sharangadhara.

9.1.7. Bhedana

Definition –

मलादिकमबद्धंवबद्धं वा पिण्डिं मलैः । भित्वाऽधः पातयति यद् भेदनं कटुकी यथा । (S.S.Pu 4/4)
विवद्धमविवद्धं वा पिण्डीभूतं मलादिकम् । भित्वाऽधः पातयति यत्तद्भेदनमुदाहृतम् । (K.N.)
भेदनीयो भेदनाय शरीरान्मलदोषनिर्हाणाय हितः । (Gangadhar Commentary on C.S.Su.4/9)
भेदनं पिण्डित मलानां द्रवीकृत्य बहिःसारणं तस्मै हितम् । (Yogendranath Commentary on C.S.Su.4/9)

The action of the substances that result in the evacuation of Mala (byproducts of metabolism) in a consolidated or non-consolidated form in a focible manner is known as Bhedana. This includes all the byproducts namely the Aahara Mala (Stools) and the Malarupa Doshas namely the Pitta and the Kapha Dosha through their normal excretory channels. The consistency may be even loose or liquid as clarified by Yogendranath. The substances that perform the action of Bhedana are known as Bhedaneeya.

The word Bhedana refers specifically to the action of breaking. Here the breaking action can be on solid poops/stool which is a sub-type of Virechana. But it can also be resulting in the breaking of calculi pertaining to bile or even urine. Thus, the action is also called by the names Bhedanam, Bhedi, Pureeshabhedi, Vidbhedi, etc. All these names are directed towards its effect on the consistency of poops and its ability to soften or liquify the consistency.

Depending on where the action is applied, the action Bhedana is prefixed by relative terminologies. For example, terms like Sharkarabhedana, Ashmaribhedana and Ashmabhit represents its action against the urinary or biliary stones. Other than this it is applied on the action against dissemination of conditions like Anaha, Raktasanghata, Gulma, etc. These actions are having represent accordingly the different actions depending on the organ concerned in the Modern contemporary pharmacology.

Modern contemporary pharmacological action – The most common action that has been associated is the Purgative activity. Even in the context of Laxatives, there is a type known as Emollient agents which have the capacity of getting more fat and water into the stools thus making them soft. Other than this even the Irritant and stimulant purgatives also can be considered to be having a similar action of Bhedana. These substances cause considerable irritation to the nerve endings in the intestine which increases the peristaltic movement leading to quicker evacuation of stools.

Thus the Bhedana action is understood in the following way:

a. System associated–mainly Digestive System
b. Panchamahabhuta responsible– Prithvi & Jala Mahabhuta;
c. Rasapanchaka responsible–Tikta Rasa; Teekshna, Ushna, Laghu, Sukshmaand Vishada Guna; Ushna Veerya; Katu Vipaka
d. Contemporary pharmacological action – Emollient agents, Irritant and Stimulant purgatives

e. Examples – Katuki (*Picrorihizza kurroa* Royle ex Benth.), Amlavetasa (*Garcinia pedunculata* Roxb ex Buch-Ham) and other substance mentioned in Bhedaneeya Gana of Charaka.

f. Clinical Application– Purgatives and laxatives are used used clinically mainly to relieve the condition of constipation. The action brought about by these substances are more concentrated on the Gastro-intestinal system along with the associated organs like Liver, Pancreas, etc. Hence, it is important to know the status of these organs before administering it. Hence, the use of these should be in a very judicious way. Any amount of abuse or irrational or illogical use may cause unwanted or possible adverse effects. Even though the action of the substance is due to Jala and Prithvi Mahabhuta basically, the irrational use may cause the increase of the stimulation and loss of fluids in the body owing to the condition of dehyrdration. Moreover, being a strong purgative by nature, its low dose for a long duration will cause considerable weight loss too. Thus, these substances have to be given strictly under the supervision of a qualified practitioner.

g. Research Updates– Researches have been done on different actions like ashmaribhedana and Bhedana type of virechana. Some of them to be noted here are –

1. A detailed review of the substances that are mentioned in the Bhedaneeya group was published by Dr. Vidyavati Hiremath et. al. showed that the group contains those which have choleretic action and also are good purgatives. It has the opinion that due to the bitter principles and other content present in the substances lead to expulsion of bile from the gall bladder. This leads to increase in the peristaltic movement of the gastro-intestinal tract leading to purgative effect.

The study show the impact of the substances on gall bladder secretions that have been mentioned under the category of Bhedaneeya. It also concludes the chain effect of the secretions on the overall purgative action which is said as Bhedana in the classical texts.

9.1.8. Rechana

Definition–

विपक्वं यदपक्वं वा मलादि द्रवतां नयेत् । रेचयततयपि तज्ज्ञेयं रेचनं त्रिवृता यथा ।। (S.S.Pu.4/6-7)

मलादिकमिति आदिग्रहणाद्दूष्यादीनामत्र संग्रहः । (Adhamalla Commentary on S.S.Pu.4/6-7)

दोषहरणमधोभागं विरेचन संज्ञकम् । (C.S.Ka.1/4)

अधोगुदेन दोषहरणं भजतेत्यधागम् । (Chakrapani Commentary on C.S.Ka.1/4)

The action is one among the four types of Virechana according to Sharangadhara. It is defined as the action that leads to the forcible evacuation of Mala (metabolic wastes) either in its properly (Pakwa) or improperly (Apakwa) formed condition is known as Rechana. Here the Mala can be from any part of the body namely even the Doshas along with Anna mala (Poops). Here the consistency of the excreta is in liquid form and the action is a forcible one. It is a condition which simulates diarrhoea but the one that is caused by the substance.

तत्र विरेचनद्रव्याणि पृथिव्यमपुगुण भूयिष्ठानि पृथिव्यापोगुर्व्यः ता गुरुत्वादधो गच्छन्ति तस्माद्विरेचनमधो गुणभूयिष्ठानुमानात् । (S.S.Su.41/6)

The action of Rechana is also known by the name Virechana, which is said to be composed mainly of Prthvi and Jala/Ap Mahabhuta. As the two Mahabhutas are heavy in nature, the effect of the substance leads to the downward effect or movement. This is also considered as the main logic in inferring the Mahabhuta dominance or involvement in the action.

As per Sharangadhara, the example for the action is Trivrit which is also considered as an example of Sukhavirechana mentioned by Charaka. Further, Charaka has classified the action to be of 3 types namely Sukhavirechana, Mriduvirechana and Teekshnavirechana. The examples that are being mentioned for the three is Trivrit, Chaturangula and Snuhi respectively. This classification represents the different classification of the action and varieties in the substances based on the intensity of action.

त्रिवृत्सुखविरेचनानां चतुरङ्गलो मृदुविरेचनानां स्नुक्पयतीक्ष्ण विरेचनानाम् ....। (C.S.Su.25/40)

Modern contemporary pharmacological action – The most common action that has been associated is the Purgative activity especially the drastic type. The substances that come under purgatives are defined as those substances that loosen the stools and expel them by increasing the peristaltic movement of the bowels. It is a very strong activity that results in the more evacuation of liquids along with excreta. Basically, these purgatives are different varieties which can be classified into types namely osmotic and stimulant purgatives. The osmotic purgatives are comparatively milder than that of stimulant purgatives as the latter acts on the nervous plexus. Depending on the intensity of stimulation they can be segregated into mild, moderate and severe. The mild are usually osmotic laxatives where the substances retain the fluid thus increasing the bulk of poop that stimulates the action. The moderate ones are

slightly stronger than osmotic laxatives but are stimulants in nature. They cause irritation on the intestinal walls leading to increase of secretions which inturn increases the bulk which results in the stimulation of excretion. Finally, the cathartic laxatives which are very strong in action and are the ones that act on the nervous plexus to produce the effect. It is this reason that these are more drastic and often cause colic pain or cramps.

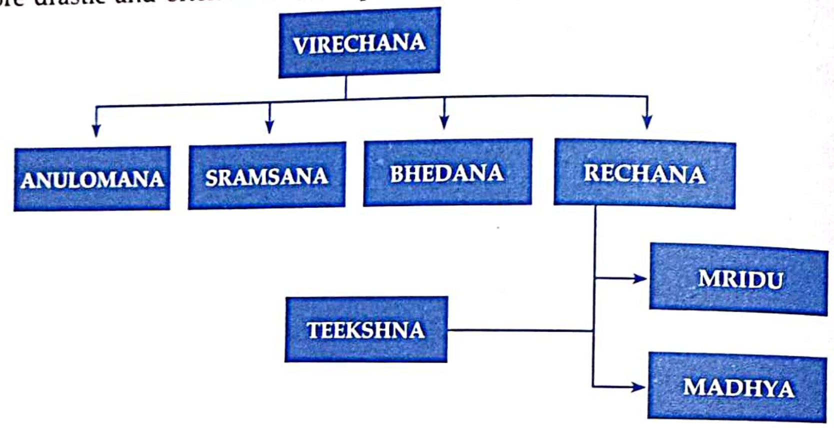

Figure No.12 Classification of Virechana/Rechana

TYPE	ACTION PATTERN	EXAMPLE
MRIDU / Osmotic laxatives	Retains water and electrolytes thus increasing the osmotic pressure leading to increase of volume and stimulation of evacuation	Salt water
MADHYA / Stimulant laxatives	They stimulate or irritate the mucosa of intestine leading to increase in secretion and accumulation of water in the lumen. This increases the volume and stimulate evacuation.	Eranda taila or Castor oil
TEEKSHNA / Drastic purgatives	They are stronger in action and act on the nerve plexus of the intestine which increase the peristaltic movement leading to quicker emptying of the bowels and evacuation.	Jayapala or Croton seeds

The mechanism of action with respect to Rechana is as per Samshodhana which is with respect to Virechana action (Figure No. 8).

Thus the Rechana action is understood in the following way:

a. System associated–mainly Digestive System

b. Panchamahabhuta responsible– Prithvi & Jala Mahabhuta

c. Rasapanchaka responsible – Katu, Tikta, Kashaya Rasa; Ushna, Teekshna, Sukshma, Vyavayi, Vikasi Guna; Ushna Veerya; Adhobhagahara Prabhava.

d. Contemporary pharmacological action – Purgative

e. Examples – Trivrit (*Operulina turpethum* (Linn) Silva Manso.), Snuhiksheera (latex of *Euphorbia nerifolia* L) and Erandataila (oil of *Ricinus communis* L)

f. Clinical Application– The action is one of the most useful especially in the strong invasive treatments namely Virechana karma among Panchakarma. Other than this, Purgatives and laxatives are used used clinically mainly to relieve the condition of constipation. Even though the effect of the action are mainly seen on the intestines, the whole body is effected through the changes in the fluid and electrolytes conditions of the body. Even the organs like Liver, pancreas are also affected to the extent that at certain times they also get healed. On the flipside of this, the action is a very rigorous one leading which it may cause considerable harm. Thus, it is to be used with utmost caution and expert supervision. This is due to the fact that any abuse or irrational or illogical use may cause unwanted or possible adverse effects.

g. Research Updates– Researches are conducted on the action in the name of Virechana both experimentally and clinically along with literary ones. Some of them to be noted here are –

1. An experimental study of the action conducted on albino rats by Dr Ashutosh Chaturvedi et.al. showed that the treatment virechana is effective in the management of metabolic disorders especially it decreased the fatty acid that was stored in organs like liver, kidney, etc. It also increased the insulin sensitivity of insulin receptors in the skeletal muscles too. This fact shows that it is having a notable effect in the body metabolism which is not restricted to the GI tract alone.

2. A clinical study on the effect of Virechana treatment over the gut flora was conducted by Dr. Ashutosh Chaturvedi et.al. showed that the treatment had a reduction effect on the colonies of E.Coli bacteria present in the gut. It also showed that there was a marked effect on dysbiosis of the Gut as well which initiated the weight loss mechanism in obese people.

3. Another clinical study on the effect of Virechana treatment on serum electrolytes by Dr. Adil Rais et. al. showed that the electrolytes only varied within their normal ranges. Even the participants didn't have any complain regarding the treatment especially like dehydration and their related symptoms. This showed that the treatment is more safe and effective when administered properly and judiciously with due consideration of the patient along with the disease.

These studies show that Virechana action is one of the very effective lines of treatment that promotes more health to the individual. Moreover, it is the Pitta Dosha that is being the most affected one by this treatment which is evident from the studies as it improves the metabolism too.

9.1.9. Chedana

Definition-

श्लिष्टान् कफादिकान् दोषानुन्मूलयति यद्बलात् । छेदनं तद्यथा क्षारा मरिचानि शिलाजतु ।। (S.S.Pu.4/9)

विश्लेषयति यद्दोषान्संहतास्तु कफादिकान् । पश्चादुन्मूलयत्याशु विज्ञेयं तद्धि छेदनम् ।।

संग्रहस्य विभागं यद्विधायोन्मूलने क्षमम् । भवत्याशु तदप्याहुश्छेदनं क्षारवत् बुधाः ।। (K.N.Mishraka-varga 199-200)

The action of the substance that forcibly removes the Doshas which have adhered to the walls of the srotas, such an action is known as Chedana. Here the forcible expulsion is from the region where it has attached itself. The action envisages two sub actions namely forcible separation and forcible expulsion of the separated Kapha and other Doshas. The Doshas which have mass is Kapha and Pitta Doshas which are also found to be Mala of Rasa and Rakta Dhatu respectively. Other than these the Vata Dosha is affected by number of factors that block its pathway. The condition is known as 'Avarana' where the action is at times found to be useful such that the pathway gets cleared.

The word 'Shlishta' in the reference emphasizes the condition of the Dosha where it is being attached to the walls of the srotas or that blocks the pathway such that the movement is completely or partially restricted. Here the aspect of intermingling of the Dosha or the Dosha and the Dushya (the Dhatu or body tissues) or even the Krimi that has blocked the pathway has to be taken with respect to 'Kaphadi Dosha'. Thus, the main effect of the action Chedana is that it facilitates the removal of adhering things such that there is proper potency of the pathway leading to normalization of the movement or physiological functions.

In the context of Agra Dravya, Charaka has mentioned Hingu (Ferula narthex-Boiss.) to be the best substance with Chedana action.

हिङ्ग्निर्यासच्छेदनीयदीपनीयानुलोमिक वातश्लेष्महराणाम् ।। (C.S.Su.25/40)

From the Surgeon's point of view, Chedana has a different aspect which is explained by Sushruta in the reference below:

अपाकेपु ति रोगेपु कठिनेपु स्थिरेपु च । स्नायुकोथादिपु तथाच्छेदनं प्राप्तमुच्यते ।। (S.S.Ch.1/33-34)

In the field of surgery, the action is more of a mechanical than that of the substance. It is enlisted under the list of Shashtiupakrama or 60 treatment methodologies. Only that the substance is sharp object that helps in cutting through the surfaces.

Modern contemporary pharmacological action – The activity when it is compared with the contemporary science, it is usually associated with Expectorants. But the action is a two step one which involves separation of the Doshas from the surface and then forcible expulsion. Thus, the actions to be considered here are both Expectorant and Mucolytic actions. These actions are on the respiratory system, but the actions also hold good to other parts of the body like anti-atherosclerotic actions can also be considered as Chedana too.

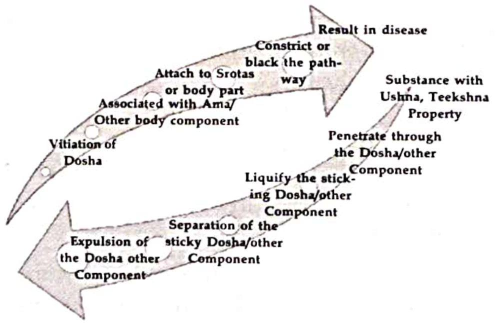

Figure No.13 Summarised presentation of Chedana Karma

Thus the Chedana action is understood in the following way:

a. System associated– All pathways or channels

b. Panchamahabhuta responsible– Agni Mahabhuta; Mainly Agni Mahabhuta

c. Rasapanchaka responsible - Lavana, Amla, Tikta or Katu Rasa; Teekshna, Ushna, Laghu, Sukshma, Khara and Vishada Guna; Ushna Veerya; Katu Vipaka.

तत् षड्साश्रयद्रव्याणि हि अम्ल लवण कटूभिः शारीर क्लेदादीनिच्छिन्दन्ति मधुरतिक्तकषायैरुपशमन्ति ते रसौ न भवतः। (Gangadhara Commentary on C.S.Su.26/12)

d. Contemporary pharmacological action - Mucolytic, Antiatherosclerotic & Expectorants

e. Examples - Maricha (*Piper nigrum* L.), Shilajatu (Bitumen) and Kshara (Alkalies extracted from calcinated plants)

f. Clinical Application - Clinically, there are several conditions where there is a necessity of forcible expulsion, these substances are to be used. Here also the use of the substances should be in accordance with the necessity and in a very judicial way. The substances are having a very strong action as they have Teekshna and Ushna guna. It is these properties that will help in cutting through and also liquify the Dosha or the complex known as Dosha-Dhatu sammurchana. The mechanism of Chedana as described is done in two step where one is cutting through the matter that is attached to the Srotas while the activity is followed by the forcible expulsion. In broader sense, this is more explainable as Mucolytic and Expectorants but when done with deeper analysis, this will include actions like anti-atherosclerotic too where the fat deposition on the vascular lumen known as atherosclerosis are slowly removed by the medicinal substance. In either of the activity, there is penetration into the substance that has got deposited over a particular surface and this is followed by its expulsion through the normal pathways. Some of the substances like Kshara, have untoward hazardous effects if used injudiciously to the extent that it may cause infertility of the user upon chronic use. Hence, it is always advised to have a logical and a judicious use to attain utmost benefits.

g. Research Updates - Various researches on Chedana Karma is mainly concentrated on the Kshara and its similar preparations. The main use of Kshara (Alkaline extract of herbs) are used in different surgical and sub-surgical procedures. It is one of the main lines of treatment in various diseases that fall in the domain of Shalyatantra. Some of them are being enlisted below:

1. A comparative study of Chedana action was published by Dr. Sunitha Shiraguppi et. al. where the action was analysed the effects of pratisaraniya Kshara (Alkaline drinks) and Agnikarma (Cauterization) on Kadara (Corn) disease showed that among the two procedures the effect of Agnikarma was more effective than Kshara.

2. A study the effect of Chedana action on pilonidal sinus was done by Dr. Syed Abdul Wahid and Dr. Arvind Gajbhiye by using the Ksharasutra. The study showed that the use of Ksharasutra showed a better effect on healing than the simple Chedana (excision) activity.
3. A comparative study on the efficacy of Twageladi churna and Brihatsharkarasama churna by Dr. Ayana K T and Dr. Surekha Pai showed that the ingredients that are present in both the formulations have the action of Kapha Chedana action which is further augmented by the use of Honey as Sahapana or vehicle for taking the Churna.

The first two studies show that the Chedana action which is a surgical treatment is being highlighted. The 3rd study is mainly highlighting the mucolytic action which is usually equated with the action of Chedana.

9.1.10. Lekhana

Definition -

धातून्मलान्वा देहस्य विशोष्योल्लेखयेच्च यत् । लेखनं तद्यथा क्षौद्रं नीरमुष्णं वचा यवाः ।। (S.S.Pu.4/10 & B.N.Pu.6/226)

विशोष्योल्लिख्य यद् द्रव्यमपवृष्य शनैः शनैः । दोषानुन्मूलयत्येवं लेखनं तद्यथा वचा ।। (K.N.Mishraka-varga 201)

लेखनं कफमेदसोः । (Dalhana Commentary on S.S.Su.41/6)

The action of the substance that results in the drying up of the Dhatu and the Mala in the body resulting in removal or shedding of the body tissues leading to slimming of the body is known as Lekhana. Here the ability of the substance to act on three different aspects namely -

1. Reduce moisture by drying the components of the body especially Kapha, Medas
2. Reduce bulkiness by drying the components of the body especially Kapha, Medas
3. Scrap the body components like Kapha, Medas, etc. resulting in slimming of the body.

As per Hemadri, the property that is primarily useful among the 20 properties or Gurvadi Gunas is the Kharaguna as mentioned in the context.

लेखने खरः। (Hemadri Commentary on A.H.Su.1/18)

The action is also called by the names Medohara, Samlekhna and Vilekhana. The Lekhana action is also possible in two ways namely Physical and Chemical. The Physical lekhana is done by the use of a substance that has a rough

(Khara) surface while the Chemical one represents the interaction of the substance with the body components leading to reduction of Kapha and Medas basically.The most important effect exhibited by the action is the slimming of body. The action envisages the ability of the substance to remove the fat that has been accumulated in the body. This gives the chemical dimension of the activity while the physical dimension is seen in the use of substances like the leaves of Parijata (Nyctanthes arbor-tristis L.) in the treatment of Kacha (Eye cataract) by Sushruta as they possess rough surface. Thus, in the context of Shalyatantra, like the Chedanakarma, the Lekhanakarma too assumes a similar approach. Here also Lekhana is also mentioned as one among the Shashtiupakrama of Sushruta.

Modern contemporary pharmacological action – Like all the pharmacological activities of Ayurveda, even Lekhana is a complicated one to be explained in terms of Modern Pharmacology. The most common action that has been associated is the Hypolipidemic activity. The activity is the one that lowers the lipids and lipoproteins in the blood and body as a whole which are the main cause for the conditions like atherosclerosis, obesity, etc. The mechanisms of the substances that can produce hypolipidemic effect is by 4 different mechanisms namely –

1. Decrease of Cholesterol synthesis by inhibition of 3-Hydroxy-3-methyl glutaryl coenzyme A (HMG-CoA) reductase.
2. Decrease of Bile acid absorption along with an increase in hepatic conversion of cholesterol to bile acids and LDL receptors on hepatocytes.
3. Increase in the activity of Lipoprotein lipase along with the decrease in the release of fatty acids from adipose tissue.
4. Decrease in the production of VLDL and lipolysis in adipocytes.

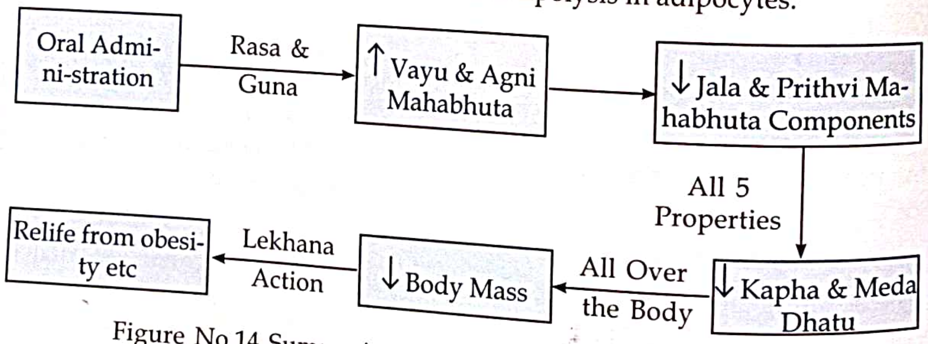

Figure No.14 Summarised presentation of Lekhana Karma

Thus the Lekhana action is understood in the following way:

a. System associated– All pathways and Channels
b. Panchamahabhuta responsible–Agni & Vayu Mahabhuta;
   लेखनमनिलानलगुणभूयिष्ठम् । (S.S.Su.41/7)
c. Rasapanchaka responsible – Tikta, Katu or Kashaya Rasa; Laghu, Ruksha, Teekshna Guna; Ushna Veerya; Katu Vipaka
d. Contemporary pharmacological action – Hypolipidemic
e. Examples– Kshaudra (Honey), Ushnajala (Hot water), Vacha (*Acorus calamus* L.) & Yava (*Hordeum vulgare* L.); Charaka – Lekhaneeya Gana
f. Clinical Application – Medicinally, the physical use of Lekhanakarma can be equated to Curettage procedures in medicine. The procedure is defined as "A surgical cleaning or scraping of a body part (as the uterus) by means of a curette." The procedure is more commonly employed in the gynecological conditions (Dilatation & Curettage or D&C). Usually the procedure is employed for the removal of tissues from the wall of the cavity like uterus or from any other surface like in skin cancer.

   The medicinal use of the action is clearly indicated in the process of Hypolipidemic effect as the main effect of the action is mentioned as the decrease in the body mass or treat obesity. Among the four routes, the suitable class of medication is to chosen but all of them decrease the lipids in the blood and the body as a whole which is the major cause to increase the mass of the body. The action is also responsible for the decrease of the cholesterol which is the major cause of atherosclerosis too.
g. Research Updates – The action Lekhana has been studied though the literature and clinical mode to assess the action. Some of them to be noted here are –
   1. A detailed and critical analysis of the concept of Medohara and Lekhana substances was done by Dr. Harshitha Kumari et.al., concluded that the substances that had Katu, Tikta, Kashaya Rasa; Ushna Veerya; Laghu, Ruksha Gunaare largely responsible for the Medohara and Lekhaneeya action.
   2. A detailed review on the Scraping therapy of the Chinese Medicine technically known as Gua Sha was done and published by Dr. Eric Chun Pu Chu et.al. The review concluded that the therapy has a cascade of physiological effect on skin, nervous system and the immune system as the therapy is a mechanical signal to elicit the immune response.

3. A clinical study on Vacha with respect to its Hypolipidemic action was done by Dr. Kaur Sethi H. and Dr. R Gupta found that the Vachachurna had a significant effect on hyperlipidemia. The Scholars postulated that Vacha act on LDL receptor system leading to increase in the activity of lipoprotein lipase which is helpful to remove the fattyacids of Triglycerides.

These studies show that the physical and chemical effect of Lekhana (Scraping) have their own effects on the physiology of the individual. Still there is a large scope of studies necessary to ascertain the mode of action and the pharmacology of Lekhana.

9.1.11. Grahi

Definition-

दीपनं पाचनं यत्स्यादुष्णत्वाद्रवशोषकम् । ग्राहि तच्च यथा शुण्ठी जीरकं गजपिप्पली ।। (S.S.Pu.4/11-12)

यद् द्रव्यं दीपनमग्निकरं पाचनमामादीनां द्रवशोषकमिति द्रवस्वरूपाणां दोष धातु मलादीनां शोषकमित्यर्थः उष्णत्वादुष्णवीर्यत्वात् द्रवशोषकमिति योज्यं दीपनादि कार्यकरत्वेनोपदक्षितमितिभावः तद् ग्राहि विज्ञेयम् । (Adhamalla Commentary on S.S.Pu.4/11)

The action of the substance that results in both Deepana and Pachana activity along with the absorption of the excess moisture or fluidity is known as Grahi. The action is a combination of the effect that leads to increase of metabolic activity and appetite of the individual thereby correcting the body metabolism. It also has the activity which ensures proper absorption too leading to correction in the formation of Mala (metabolic byproducts). The reference itself gives the property as Ushna guna that is responsible for the activity.

द्वयोर्निग्रहणम् सांग्राहिकम् । (Rasavaisheshika Sutra 4/23)

द्वयोरित्युक्तं विशोपितम् तथा पित्त श्लेष्मनोरिति गम्यते पार्थिव वायव्यत्वादस्य वीर्यस्याश्रय च लवण तीक्ष्णोष्णोभ्योऽन्यत्वात् पित्तनिग्रहे समर्थः पार्थिववायव्यत्वाद् रौक्ष्य वैशद्याभ्यां श्लेष्मनिग्रहे समर्थम् । (Bhashya Commentary on Rasavaisheshika Sutra 4/23)

As per Nagarjuna, the action is mainly for the control of two important factors in the body which is Pitta and Kapha Dosha. Here the Teekshna and Ushna property generated by the combined action of Prithvi and Vayu Mahabhuta present in specially in Lavana, helps to control the Pitta Dosha while the Ruksha and Vishada property of the same Mahabhuta is useful in the control of Kapha Dosha. The action is also called by the names Ushna Sangrahi, Sangrahi, Sangrahikam

and Grahi. Here the action is mainly directed to the effect of absorbing moisture and resulting in the increase of viscosity or thickening of the substance.

Modern contemporary pharmacological action -Water absorption is the main effect that is observed in the action of Grahi. But water transport is mainly happening in two steps and is dependent on Sodium ion absorption. They are the Passive and Active Sodium ion entries that happen in the intestines. Water is primarily absorbed in the proximal part of the small intestine and more efficiently in the large intestine while its passive process is highly dependent on the net solute absorptions.The action that is similar to that of Grahi is absorbants which is defined as the substance which absorb water and swell. They are basically a collidl bulk forming substances that modify the frequency and consistency of stools without reducing water and electrolyte loss.

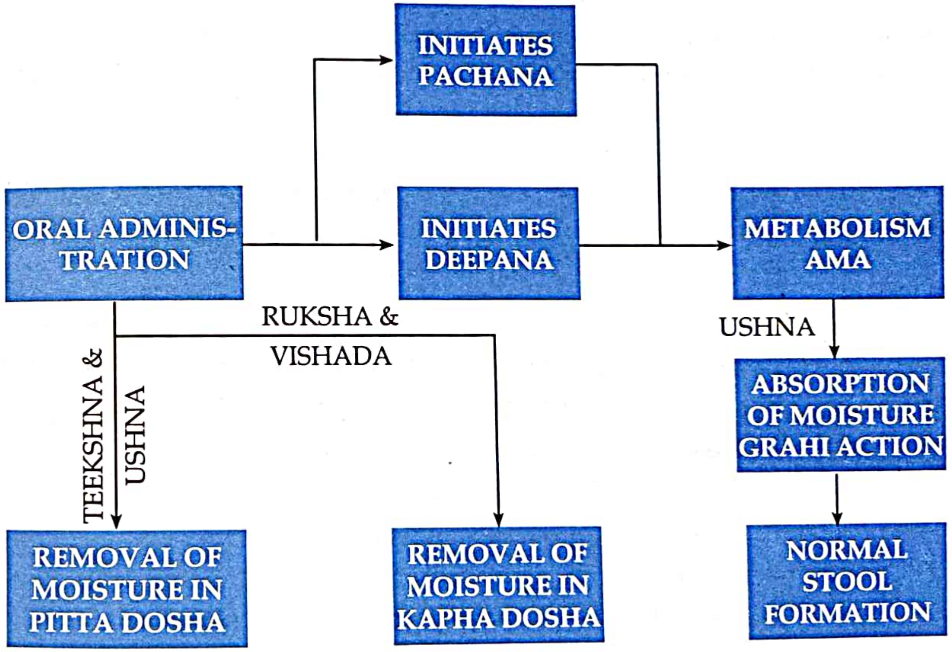

Figure No.15 Summarised presentation of Grahi Karma

Thus the Grahi action is understood in the following way:

a. System associated - mainly Digestive System
b. Panchamahabhuta responsible - Agni, Prithvi & Vayu Mahabhuta;

c. Rasapanchaka responsible – Lavana or Katu Rasa; Teekshna, Ushna, Ruksha, and Vishada Guna; Ushna Veerya; Katu Vipaka

d. Contemporary pharmacological action – Absorbant

e. Examples – Shunti (*Zinziber officinale* Roscoe.), Jeeraka (*Cuminum cyminum* L.) and Gajapippali (*Scindapsus officinalis* Roxb Schott)

f. Clinical Application – The use of Grahi action is mainly in the condition of Amatisara. But as per the description, this is also useful where the secretions are in a increased state. Hence the application has a wider capability, but is commonly seen to be useful in the aspect of Amatisara and also Grahani. The action is also concentrated towards the correction of Agni which is an important component of the body. One of the most common ones that are used is the Musta (Cyperusrotundus L) and fruit pulp of Bilva (Aeglemarmelos L Correa). As substances that are associated with action Grahi is having Ushnaveerya, care should be taken to avoid their over doses as it may lead to the disturbance of Pitta Dosha.

g. Research Updates – Researches pertaining to the action Grahi is mainly of clinical in nature especially on different intestinal conditions like Ulcerative collitis, IBD, IBS, etc. Some of them to be noted here are –

1. A study on the effects of ayurvedic treatment modality on Ulceractive collitis was done by Dr. Manish V Patel et.al. on 43 patients. The study concluded that there was a very considerable and positive response for the treatment which was postulated to be resultant due to different actions including Grahi.

2. A study on Shuntyadi Churna and Latakaranja Churna was done on patients of Amatisara by Dr. Abhijeet K Patil et.al. showed that the Shuntyadi Churna which is a combination of many substances having similar properties of Deepana, Pachana and Grahi had better effect over the other. Here also the effect of the action Grahi was observed over the condition clinically.

These studies show that the action Grahi is very useful in the treatment of many grave conditions pertaining to the GI Tract.

9.1.12. Stambhana

Definition–

रोक्षयाच्छैत्यात् कषायात्वाल्लघुपाकाच्च यद्भवेत् । वातकृत् स्तम्भनं ततद स्याद्यथा वत्सक दुण्दुकौ ।। (S.S.Pu.4/12)

स्तम्भनं स्तम्भयति यद् गतिमन्तं चलं ध्रुवम् । (C.S.Su.22/4)

स्तम्भनो हिमः । (Hemadri Commentary on A.H.Su.1/18)

रूक्षस्तद्विपरीतः स्याद्विशेषात् स्तम्भनः खरः । (S.S.Su.46/523)

When a substance will enforce the stoppage of the contents being expelled out of the pathway by blocking it is known as Stambhana. The main properties that are useful in bringing about the action are Ruksha and Sheeta Guna. This action is said to have the capability of vitiating the Vata Dosha as it blocks the movement considerably. The main Rasa that is responsible to execute the action is Kashayarasa.

Here the property that produce the action Stambhana is Ruksha and Sheeta have two distinct mechanisms of producing the effect. Sheetaguna is known for constricting the lumen of the pathways (like vasoconstriction) leading to the blockage of the pathways while Rukshaguna will make the surface of the pathways rough (Khara) which leads to aggregation of the contents in the area. The aggregation inturn blocks the pathway considerably giving the overall effect of Stambhana. When the two properties are together then one can expect the combination of both mechanisms leading to the effect of Stambhana. Kashayarasa which is the resultant of the two Mahabhuta namely Vayu and Prithvi performs the action of Stambhana in a different manner where they tend to block the movements by inhibition of the pathways thus blocking its functionality. It is thus with all probability, that the three have been mentioned by Sharangadhara separately to depict the three mechanisms that show the same effect. The general effect in all the cases is inhibition of mobility, blocking of the flow and stabilizing both the effects.

Depending on the part of the body where it is being applied, the action is known by different names in relation to the part like Sheetasamgrahi, Raktastambhana, Pureeshanigrahana, Chardinigrahana, Stambhana, etc. All these names ensure that the effect is the same even though the mechanism is being different.

Modern contemporary pharmacological action – The most common action that has been associated is the Anti-diarrhoeal activity. But other actions like Styptics and neuro-inhibitiors that lead to the blocking effect can also be considered.

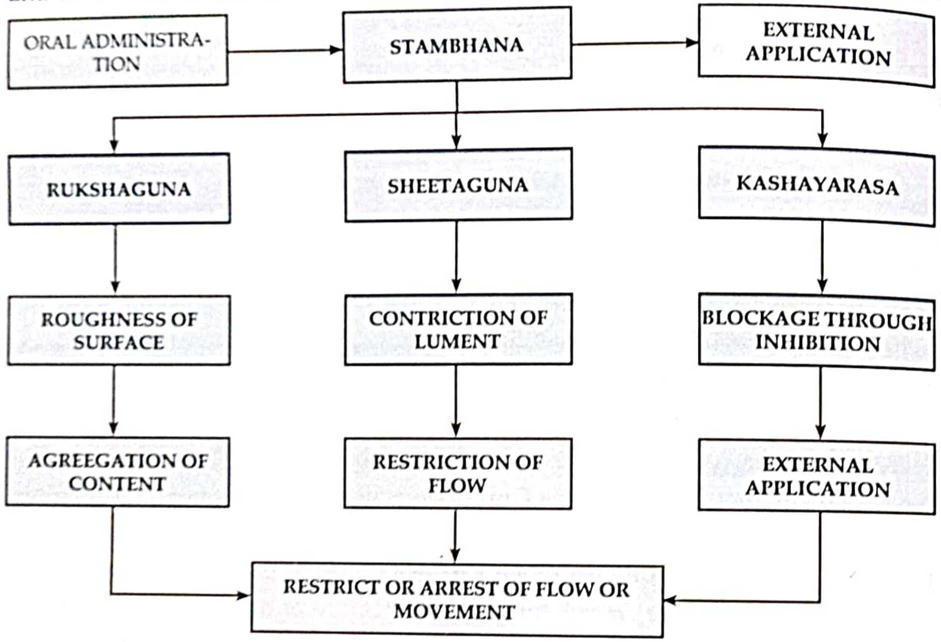

Figure No.16 Summarised presentation of Stambhana Karma

Thus the Stambhana action is understood in the following way:

a. System associated–All Pathways in the body
b. Panchamahabhuta responsible–Prithvi & Vayu Mahabhuta
c. Rasapanchaka responsible – Kashaya Rasa; Ruksha, Laghu and Sheeta Guna; Sheeta Veerya; Katu Vipaka
d. Contemporary pharmacological action – Anti-diarrhoeal, Styptics
e. Examples – Vatsaka (*Holarrhena antidysenterica* L.) and Tuntuka (*Oroxylu mindicum* (L) Kurz.)
f. Clinical Application – The clinical application of this action is in different aspects ranging from GI tract to even hemostatic effect on the blood vessels to arrest bleeding. Depending on the part that the effect is required, the relative action can be executed. For example, Kashayarasa is mainly used in the treatment of diarrhoea where it acts as an antidiarrhoeal agent. Whereas while the effect to styptic action is required to arrest bleeding, Sheetaguna is being employed along with Rukshaguna to reduce the flow of blood so that the aggregation of cells is possible to arrest the bleeding points. In some cases even inhibition of neurotransmitters are also possible to have the effect of stambhana. Thus, depending on the part where the action is to be manifested, the related substance has to be selected.
g. Research Updates – The researches on stambhana action are done with respect to their literary and clinical studies. Some of them to be noted here are–
   1. A review based on the treatment modalities with respect to the action was done and compared with that of Grahi action by Dr. Dhaneshwari S Kanashetti and Dr. Kamal Nayan Dwivedi which concluded that both the substances used to generate both these actions have tannins that are useful in controlling the excessive flow of body fluids.
   2. A review on the effect of tannin on human health was done by K T Chung et.al., concluded that tannins accelerate the blood clotting mechanism along with many other functions like reducing the blood pressure, modulate immuneresponse, etc. But the review also noted that the dosage of tannins play a critical role in obtaining the optimum results.

The studies are important from the aspect of ascertaining the roles of different properties of the substance that can bring out the multiple effect. Here the Stambhana action is useful in different ways which shows that Ayurvedic pharmacological actions are infact a group of actions that have a similar effect and not just one modality of action.

9.1.13. Madakari

Definition –

वुद्धिः लुम्पति यद्रव्यं मदकारि तदुच्यते । तमो गुण प्रधानं च यथा मद्यं सुरादिकम् ।। (S.S.Pu.4/21-22)

सर्वान् रसान् तीक्ष्णोष्णरूक्षलघुविशदांश्च गुणान् मदनीयम् । तदाग्रेयं वायव्यं च । (Rasavaisheshika Sutra 4/11/12)

प्रहर्पणः प्रीतिकरः पानान्नगुणदर्शकः । वाद्यगीतप्रहासानां कथानां च प्रवर्तकः ।।
न च वुद्धिस्मृतिहरो विपयेपु न चाक्षमः । सुखनिद्राप्रविधश्च प्रथमह सुखदो मदः ।।
मुहः स्मृतिर्मुहुर्मोहोऽव्यक्तासज्जति वाङ्मुहुः । युक्तायुक्रतप्रलापश्च प्रचलायनमेव च ।।
स्थानपानान्नसांकथ्योजना सविपर्यया । लिङ्गान्येतानि जानीयादापिष्टे मध्यमे मदे ।।
मध्यमं मदमुत्क्रम्य मदमप्राप्य चोत्तमम् । न किंचिन्नाशुभं कुर्युर्नरा राजसतामसाः ।।

की मदं तद्दशं विद्वानुन्मादमिव दारुणम् । गच्छेदध्वानसरवन्तं बहुदोषभिवाध्वगः ।।
तृतीयं तु मदं प्राप्य भग्नदार्विव निष्क्रियः । मदमोहावृतमना जीवन्नपि मृतैः समः ।।
रमणियान् स विषयान्न वेत्ति न सुहृज्जनम् । यदर्थं पीयते रतिं तां च न विन्दति ।।
कार्याकार्य सुखं दुःखं लोके यच्च हिताहितम् । यदवस्थो न जानाति कोऽवस्थां तां व्रजेद् बुधः ।।
स दूष्यः सर्वभूतानां निन्द्यश्चाग्राह्य एव च । व्यसनित्वादुदर्के च स दुःखं व्याधिमश्नुते ।। (C.S.Ci.24/42-51)

The substance that produces the condition where the intellect of the individual is completely masked is known as Madakari. The substance is said to be dominated by Tamoguna and hence the decision taking ability is masked or temporarily lost due to altered consciousness. Even though there are 3 stages mentioned by Charaka, there is a description of 4 stages by an intermittent stage between madhyama and Tritiya Avastha. Thus the 4 stages are as below-

1. Prathama Avastha of Mada (Stage 1)- The first stage of Mada (Intoxication) is characteristed by Praharsha (Happiness or excitement), Preetivardhaka (Very friendly and pleased) and the qualities of the food and the intoxicating substance is exhibited, performs activities like singing, storytelling, excessive conversation, etc in a proper way and will not loose presence if mind. The person will have proper and comfortable sleep with a feeling of freshness when awoke.
2. Madhyama Avastha of Mada (Stage 2) – The second stage of Mada (Intoxication) is characterized by changes in the status of consciousness leading to loss of memory intermittently. There will be irrelevant speech which at times may stop abruptly due to intermittent loss of consciousness. The person swings between relaxed and irritated stature every now and then. The food and water is either taken in excess or completely discarded.
3. Intermittent stage between Stage 2 & 3 (Stage 3) – The stage is generated by the involvement of Tamo and Rajo Guna of Manas. Here the person has the ability to perform all types of irrelevant and unethical activities leading to the pathway of self-destruction.
4. Triteeya Avastha of Mada (Stage 4) – In this stage, the individual will lose the consciousness completely. The person will not be able to perform any activity and also will not be able to differentiate between beneficial and detrimental activities leading to completely deviating from personal goals.

बुद्धिस्मृतिप्रीतिकरः सुखश्च पानान्ननिद्रारतिवर्धनश्च ।
संपाठगीतस्वरवर्धनश्च प्रोक्तोऽतिरम्यः प्रथमो मदो हि ।।

अव्यक्तबुद्धिस्मृतिवाग्विचेष्टः सोन्मत्तलीलाकृतिरप्रशान्तः ।
आलस्यनिद्राभिहतोमुहुश्च मध्येन मत्तः परुषो मदेन ।।

गच्छेदगम्याश्च गुरुश्च मन्येत्खादेदभक्ष्याणि च नष्टसंज्ञः ।
ब्रूयाच्चगुह्यानि हृदिस्थितानि मदे तृतीये पुरुषोऽस्वतन्त्रः ।।
चतुर्थे तु मदेमूढोभग्नदार्विव निष्क्रियः भग्नदार्विव निष्क्रियः । कार्यकार्यविभागाज्ञौ मृतादप्परो मृतः ।। m.n

Even the same stages are mentioned in Madhava Nidana text highlighting it as 4 stages of intoxication.

The pharmacokinetics of Madakari action is explained in Charaka Samhita as below:

मद्यं हृदयमाविश्य स्वगुणीरोजसो गुणान् । दशभिर्दश संक्षोभ्य चेतो नयति विक्रियाम् ।।
लघूष्णतीक्ष्णसूक्ष्माम्लव्यवाय्याशुगमेव च । रूक्षं विकासि विशदं मद्यं दशगुणं स्मृतम् ।।
गुरु शीतं मृदु श्लक्ष्णं वहलं मधुरं स्थिरम् । प्रसन्नं पिच्छिलं स्निग्धमोजो दशगुणं स्मृतम् ।।
गुरुत्वं लाघवाच्छैत्यमौष्ण्यादम्लस्वभावतः । माधुर्यं मार्दवं तैक्ष्ण्यात्प्रसादं चाशुभावनात् ।।
रौक्ष्यात् स्नेहं व्यवायित्वात् स्थिरत्वं श्लक्ष्णतामपि । विकासिभावात्पैच्छिल्यं वैशद्यात्सान्द्रतां तथा ।।
सौक्ष्म्यान्मद्यं निहन्त्येवमोजसः स्वगुणैर्गुणान् । सत्वं तदाश्रयं चाशुसंक्षोभ्य जनयेन्मदम् ।।
रसवातादिमार्गाणां सत्वबुद्धीन्द्रियात्मनाम् । प्रधानस्यौजसश्चैव हृदयं स्थानमुच्यते ।।
अतिपीतेन मद्येन विहतेनौजसा च तत् । हृदयं याति विकृतिं तत्रस्था ये च धातवः ।।
ओजस्यविहते पूर्वो हृति च प्रतिबोधिते । मध्यमो विहतेऽल्पे च विहते तूत्तमो मदः ।। (C.S.Ci.24/29-37)

हृदये मद्यगुणाविष्टे हर्षस्तर्षो रतिः सुखम् । विकाराश्च यथासत्वं चित्रा राजसतामसाः ।।
जायन्ते मोहनिद्रान्ता मद्यस्यातिनिषेवणात् । स मद्यविभ्रमो नाम्ना मदेत्यभिदीयते ।। (C.S.Ci.24/39-40)

Basically, the properties of Madya reach the Hridaya then the properties of Madya which are 10 in number that are opposite to that of Ojus leading to the annihilation of Ojus present in Hridaya. The annihilation of Ojus will create abnormalities in Hridaya and then in Manas causing the symptoms of Mada. The 10 properties of Madya are Laghu (Light for digestion), Ushna (Hot potency), Teekshna (Penetrating), Sukshma (Minute), Amla (Sour taste), Vyavaya (Highly absorbable), Ashukari (Quick spread), Ruksha (Dry), Vikasi (Joint loosener) and Vishada (Clear). These properties are opposite to the 10 properties of Ojus namely Guru (Heavy), Sheeta (Cold potency), Mridu (Soft), Shlakshna (Smooth), Bahala (Bulky), Madhura (Sweet taste), Sthira (Stable), Prasanna (Clear), Picchila (Sticky) and Snigdha (Unctous or oily).

On intake of Madya (Alcohol), the properties start to cross out the corresponding opposite properties of Ojus. Further due to the Ashukari property Madya, spreads all over the body quickly through the channels and then will affects the Vishadaguna of Ojus. The destruction of Ojus with respect to all its properties will lead to different stages of Mada. Here the properties effect all the components of the body namely the Dosha and Dhatu along with the

site where Manas, Buddhi, Indriya and Ojus are present namely the Hridaya. In low quantities the effect is less and goes unnoticed. But when taken in excess, the Ojus is affected drastically leading to abnormalities in Hridaya. Later all the channels that have originated from Hridaya will get effected leading to further abnormalities of the channels. When the Madya doesn't affect the Hridaya to the extent that it becomes abnormal, then it is the 1st stage of Mada. But later when the quantity of Madya goes to the extent that it results in abnormalities to a small extent, then it is the 2nd stage of Mada while the 3rd stage of Mada is resulted when there is considerable destruction of Ojus and abnormalities in Hridaya. Thus, effected Hridaya due to excessive intake of Madya (Alcohol) will lead to different manifestation of abnormal emotions depending on the condition of Manas which is known as Mada.

Modern contemporary pharmacological action – The most common action that has been associated is the Intoxicant activity. But other actions like Delirioiusand Hallucinators are also having the similar effects. Even anaesthetics can also be considered to a certain extent under this category too. The abuse of these drugs cause psychological dependence which may lead to physical dependence, abuse of drug, addiction, etc.

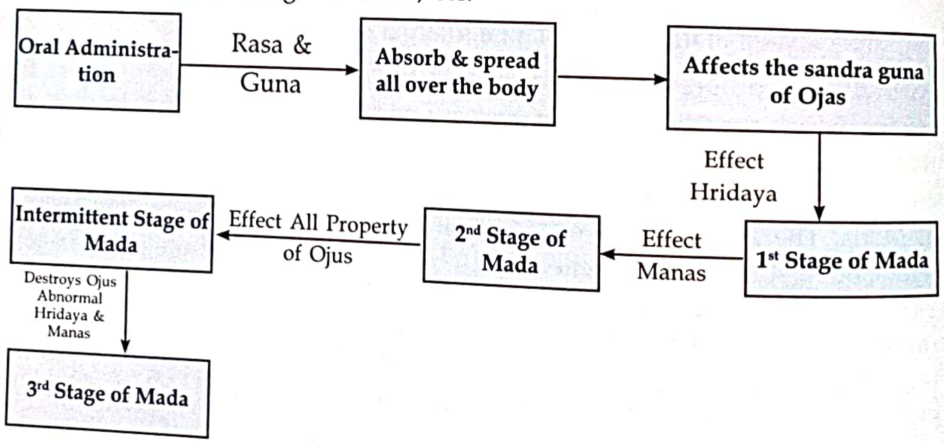

Figure No.17 Summarised presentation of Madatyaya Karma

Thus the Madakari action is understood in the following way:

a. System associated–mainly Nervous System
b. Panchamahabhuta responsible–Agni and Vayu Mahabhuta

तदाग्नेयं वायव्यं च । (Rasavaisheshika 4/11)

c. Rasapanchaka responsible – Amla Rasa; Teekshna, Ushna, Laghu, Ruksha, Sukshma, Vyavayi, Ashukari, Vikasi and Vishada Guna; Ushna Veerya; Amla Vipaka
d. Contemporary pharmacological action – Intoxication
e. Examples – Madya (Alcohol), Sura (Alcohol prepared from cereals), Ahiphena (*Papaver somniferum* L) and Bhang (*Cannabis indica* Lam)
f. Clinical Application – Clinically, the action of Madakari substances are useful in certain conditions especially in the treatment of psychological disorders. But as described, these substances are effecting the Ojus hence, only its judicial and optimum use can lead to benefits. Substances like Alcohol, Bhang, Ahiphena are having their own benefits when taken in a very less quantity but these can give out their own set of adverse reactions or even adictions when abused and used excessively for recreational purposes. Due to their adverse reactions, the use of these substances are highly restricted.
g. Research Updates – Researches that are pertaining to the action of Madakari is done on various substances that are having the capacity for the same extensively. Some of them to be noted here are –
   1. A study on alcohol intoxication and its relation to the alcohol related problems was conducted by Dan J Neal and Kate B Carey found that the self-control on the use is gets increased with negative alcohol consequences at every level of intoxication. Moreover, the self-regulation emerged as a protective factor and subsume other factors like impaired control over intoxication.
   2. A review article on the Acute toxicity effect of Cannabis sativa or else known as Medical Cannabis done by Kei U Wong and Carl R Baum concluded that owing to the growing popularity of Cannabis, there is unintentional pediatric cannabis exposures which needs to be addressed through recognition, evaluation, management and counseling.
   3. A review article on the medicinal aspects of Cannabis sativa was published by Zeinab Breijyah et.al., concluded that THC an intoxicating component of Cannabis is toxic with LD50 of 40 to 130mg/kg body weight in rat models. It is also seen that the conditions are not common in adults but has the capability of producing a wide range of effects.

The studies are with respect to different substances that are being said to have an intoxicating or Madakari effect. Here it is to be noted that these substances have been known for their medical effect as well

9.1.14. Pramati

Definition –

निजवीर्येण यत् द्रव्यं स्रोतेभ्यो दोषसञ्चयम् । निरस्यति प्रमाथिः स्यात् तद्यथा मरिचं वचा ।। (S.S.Pu.4/23)

प्रकर्षेण मथितुं स्रोतोभ्यो दोषसंचयं विर्हर्तुं शीलं यस्य तत् प्रमाथि । (D.G.P.V.Sharma vol 1 314)

The action of the substance which identifies the region in the pathways that have been effected by the accumulation of the vitiated or unvitiated Doshas and then expels that from the region is known as Pramati. The action is generally caused by virtue of its potency where it gets absorbed and then spreads quickly to reach and identify the region where accumulation has taken place in the pathways.

Modern contemporary pharmacological action – The action is related to multiple activities mentioned in Modern Pharmacology. It varies with the system and pathway that is being involved for the action. A biochemical activity or the metabolic pathway includes several enzymes, receptors and biochemicals that are constantly synthesized and degraded. The process is a continuous one which is up and down regulated depending on the need and is done by many substances that are already present in the body. Certain substances like flavanoids inhibits enzyme which can be a greater problem that lead to a harmful condition in the body. There are approximately 1300 enzymes in the cell that participate in the metabolic activity. These activity when taken as individual srotas, then the correction or regulation of these pathways along with expulsion of the accumulated chemicals or metabolites is done as per the different activities concerned to that pathway like anti-inflammatory, anti-mutagenic, anti-tumour, anti-oxidant, etc. These actions are primarily useful in removal of harmful effects on the body.

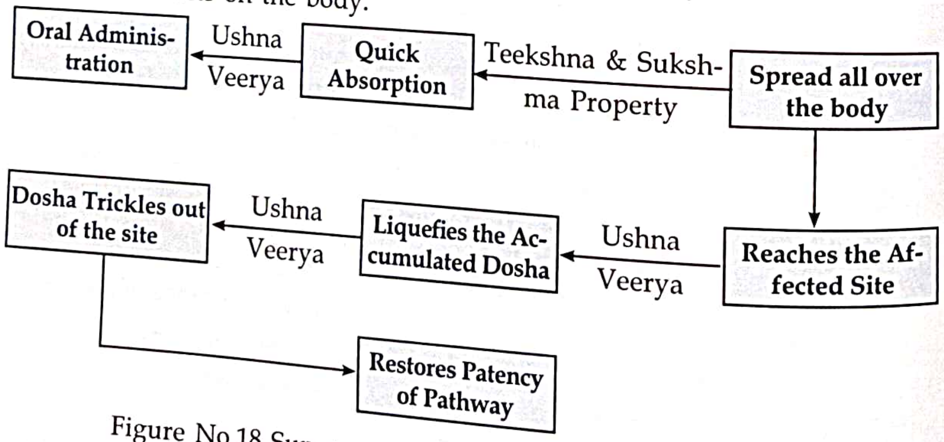

Figure No.18 Summarised presentation of Pramati Karma

Thus the Pramati action is understood in the following way:

a. System associated–All pathways in the body

b. Panchamahabhuta responsible–Agni Mahabhuta

c. Rasapanchaka responsible –Katu Rasa; Teekshna, and Ushna Guna; Ushna Veerya; Katu Vipaka.

d. Contemporary pharmacological action – Multiple pharmacological actions

e. Examples – Maricha (*Piper nigrum* L.) and Vacha (*Acorus calamus* L)

f. Clinical Application – Clinically, the action of Pramati is exemplified as pepper which is a common spice especially in India. Its use has been proved to be beneficial in certain conditions like dysphagia and even enhancement of digestive capacity. Certain studies have shown that the piperine present in the fruits of pepper are responsible to even influence the biotransforming activities in liver and intestines. The use of the pramati action is mainly for a quicker and a very effective relief especially when there is a disease condition that requires clearence of pathways. These pathways may be physical where clogging like mucosal secretions or even biochemical pathways due to the regulation of the enzymes. Depending on the condition the substances that are useful like Maricha in the first instance and also in the second while Vacha is useful in different neurological pathways along with bronchodilatory effect.

g. Research Updates – Research on the action of substances that are being enlisted as examples of Pramati activity have action on multiple pathways. Some of them to be noted here are –

1. A detailed review on the plant Vacha by Dr Harleen Kaur Sethi et. al., showed that the substance had multiple actions on different systems of the body.
2. A evaluation of the bronchodilatory effect is generated through multiple pathways as noted by Abdul Jabbar Shah and Anwarul Hassan Gilani which provide the basis for its use in the treatment of airway disorders.
3. Similarly a detailed review of Piper nigrum by Krishnapura Srinivasan concluded that it has multiple actions and is useful in many medical conditions. Especially the constituent Piperine has anti-oxidant, anti-inflammatory, etc activities and influence the metabolic pathways considerably.

As such there is no particular study on Pramati action owing to its multi-dimensional activity. The activity involves different systems and pathways leading to the complexity of actions.

9.1.15. Abhishyandi

Definition –

पैच्छिल्यात् गौरवात् द्रव्यं रुद्ध्वा रसवहाः सिराः । धत्ते यद्गौरवं तत् स्यादभिष्यन्दि यथा दधि ।। (S.S.Pu.4/24)

अभिष्यन्दि दोष धातुमलस्रोतसां क्लेदप्राप्तिजननम् । (Dalhana Commentary on S.S.Su.46/51)

The action of the substance is caused by increased Picchila and Guru Guna of the substance leading to blocking of the pathways or channels including the Rasavaha Sira is known as Abhishyandi. The action is a result of excessive moisture that the properties provide leading increase in stickiness. This inturn leads to the aggregation of the contents in the pathway thereby resulting in blocks.

The blocks caused by Stambhana action is different from this action because in Abhishyandi there is increase in the sticky nature of the contents that are moving in the pathway while in Stambhana there is no increase in sticky nature. Instead in Stambhana the action is collection of the contents due to the roughness of the channels or pathways.

Modern contemporary pharmacological action – Owing to the complexity of the action and its generalised effect, it is related to multiple activities pertaining to Modern pharmacology. The blockage may be pertaining to physical passages or even the biochemical pathways too. The relevant activity according to the involved pathway will be considered as an equivalent to one of the dimension that the action Abhishyandi has. It is to be noted that Lipids are stored in the cells in the form of droplets which play central role in lipid homeostasis. The size, number and distribution of Lipid droplets in the cellular level varies according to the metabolic cues or processes. The distribution within and between the cells into multiple cellular components blockage of biochemical pathway may be due to the various factors like lipid metabolic enzymes and the transfer proteins. Hence, the action that cause inhibition of these factors can also lead to the effect in the cellular level too

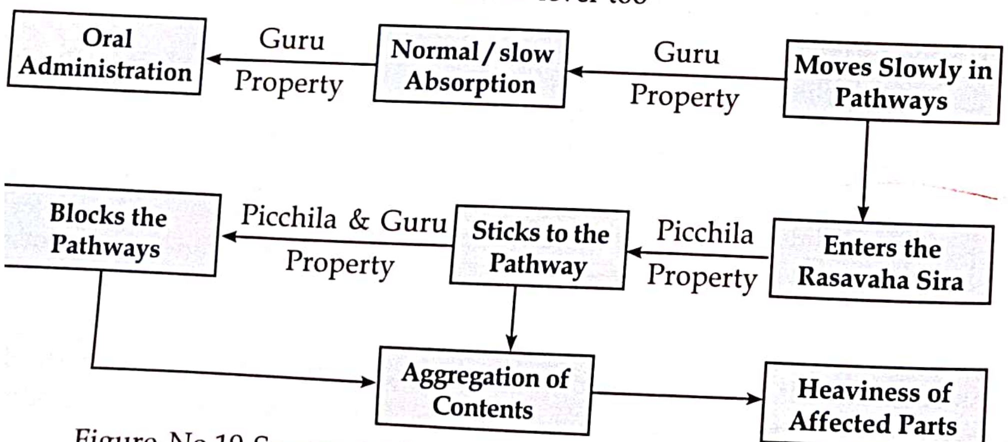

Figure No.19 Summarised presentation of Abhishyandi Karma

Thus the Abhishyandi action is understood in the following way:

a. System associated – All pathways in the body
b. Panchamahabhuta responsible – Prithvi & Jala Mahabhuta
c. Rasapanchaka responsible – Madhura, Amla & Lavana Rasa; Guru, Snigdha & Picchila Guna; Sheeta Veerya; Madhura Vipaka
d. Contemporary pharmacological action – Multiple Pharmacological actions
e. Examples – Dadhi (Curds) and Panasa (*Artocarpus heterophyllus* Lam.)
f. Clinical Application – The clinical application of Abhishyandi is usually on the negative side. The action is generally the cause for many disturbance in the metabolic activity of the body. As the main effect is to block the pathways and subsequently disturb the parts of the body that are to follow the region or activity, this disturbs the health of the individual part of the body. This consideration gives an idea as how certain substances like Curds and Jackfruit are instrumental in leading to different medical conditions in the body. For example curds increase calcium absorption which place an important role in the control of blood glucose and energy metabolism. But it is also seen that curds have the ability to perform glycation of proteins, increase chances of inflammation and also impair glucose tolerence along with oxidative stress. Hence, curds should be used judiciously as it can lead to oxidative stress that may further lead to diabetes.
g. Research Updates – Like the action Pramati the researches that are enlisted as examples of Abhishyandi activity which are seen to be involving multiple systems. Some of them to be noted here are –
   1. Curd is an important example given for Abhishyandi action where its role in the establishment and progression to diabetes was studied by Rahul Patil et. al., concluded that regular consumption of curds may lead to conditions like glycation of proteins, oxidative stress and inflammation that have fair chances leading to diabetes.

As such there is no particular study on Abhishyandi action owing to its multi-dimensional activity. The activity like Pramathi involves different systems and pathways leading to the complexity of actions.

9.1.16. Vyavayi

Definition –

पूर्वं व्याप्याखिलं कायं ततः पाकं च गच्छति । व्यवायि तद्यथा भङ्गफेनं चाहिसमुद्भवम् ।। (S.S.Pu.4/19)

व्यवायी चाखिलं देहं व्याप्य पाकाय कल्पते । (S.S.Su.46/523)

व्यवायी चाखिलं देहे व्याप्य पाकाय कल्पते । (A.S.Su.1/)

व्याप्नोति देहमादौ तत् पश्चात् पाकं च गच्छति । तद् व्यवायी .... । । (K.N.Mishrakavarga 207)

व्यवायीति गुणविशेषः । अपक्वमेवाखिलं देहं व्याप्नोति पश्चान्मद्यविषवत् पाकं याति । एवं भङ्गा अहिफेनं च । । (Adhamalla Commentary for S.S.Pu.4/19)

The action of the substance that makes it more quickly spreading and then metabolised completely is known as Vyavayi. It is that nature of the substance that makes it quickly absorbable and also undergo active metabolism giving rise to different metabolites along with their effects. As the absorption is quick into the internal compartment, the substances get spread out to all parts of the body in a quick span of time. Many of the substances especially those obtained from the chemical source or even those that are categorised as poisonous or sub-poisonous substances have this ability. Sharangadhara quotes Bhang (*Cannabis indica* Lam) and Ahiphena (*Papaver somniferum* L) as examples which are categorised under sub-poisonous (Upavisha) category. The reference also gives the idea that the effect is a systemic and not a localised one. Its ability to produce the different effects in a quick span of time is what has prompted the existence of the activity or property in Bhang or Ahiphena or similar substances.

Modern contemporary pharmacological action – For any substance to produce a systemic effect, it is very necessary that the substance gets absorbed into the blood stream. But these are completely secured with many barriers to prevent it from being polluted. Hence anything that is quick to be absorbed should cross this barriers within a quick span of time thereby defeating these barriers.

The absorption of any material depends on various factors like dose, nature, affinity, duration, mode of administration, dosage forms, etc. For example in case of Bhang or Cannabis the absorption is around 40% while smoking and only 20% when taken orally. Even sublingual administration also results in 40% absorption. Post absorption especially from the smoke or sublingual it enters directly into blood stream but in case of oral administration it enters through liver where majority of them (around 15%) is degraded thus effectively resulting in 5% concentration of the substance principles in blood stream. It is quite natural that every substance undergoes metabolism leading to several interactions and metabolites. The affinity of the metabolites towards fat makes it hide in the adipose tissue for a long duration of time even after cessation of use. Thus, it spreads quickly but undergoes metabolism slowly unlike the general method of getting metabolised into different metabolites and then spreading all over the body where they interact to produce actions. Here the metabolites

are resulted slowly while the active components are readily absorbed into the system. This is true in many chemical substances too where the substance is initially conjugated to delay the process of absorption.

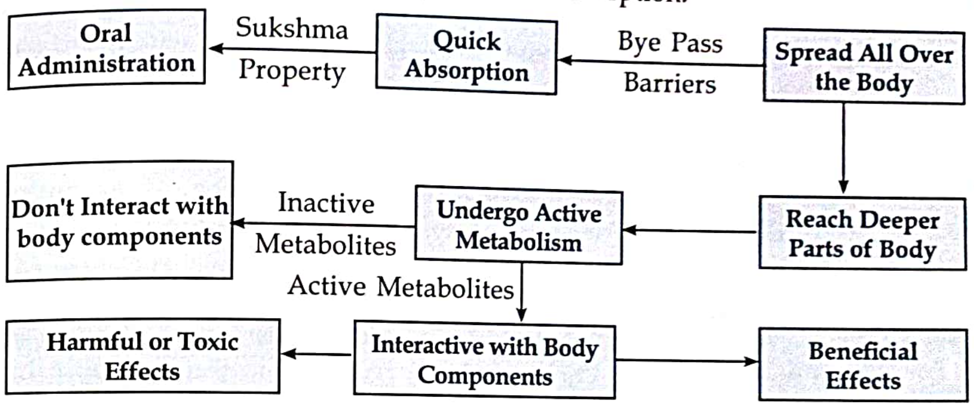

Figure No.20 Summarised presentation of Vyavayi Karma

Thus the Deepana action is understood in the following way:

a. System associated – mainly Circulatory System

b. Panchamahabhuta responsible – Vayu & Agni Mahabhuta; Mainly Agni Mahabhuta

c. Rasapanchaka responsible – Tikta or Kashaya Rasa; Teekshna, Ushna, Laghuand Sukshma Guna; Ushna Veerya; Katu Vipaka

d. Contemporary pharmacological action – Multiple pharmacological action mainly diffusive action

e. Examples – Bhang (*Cannabis indica* Lam.) and Ahiphena (*Papaver somniferum* L)

f. Clinical Application – The action Vyavayi is commonly seen in poisonous substances which when used judiciously are a very potent and quick acting substances. Basically due to their quick action, it is quite natural that they have the ability to create unwanted effects or Adverse effects. Thus, a judicious use can reap good benefits. For example Ahiphena is a potent drug for problems related to GI tract. Bhang is also a very potent drug in many disorders concerned with GI tract. Both are employed as anti-inflammatory drugs by the Allopathic system of medicine in form of Morphine and Cannabidiol (CBD) respectively. The quick effect generated by the plants is quite evident that its absorption is much quicker than other herbal or any other drugs which shows that its active ingredients tends to bypass the normal metabolic reactions. Even in Ayurveda, the substances used for Samshodha-

na, mainly Vamana and Virechana, the vyavayi activity along with Vikashi is very much necessary so that it can spread quickly and perform the action of Vamana or Virechana before it gets digested.

g. Research Updates – Vyavayi action is mainly seen in poisonous or sub-poisonous substance. The research on Vyavayi action is mainly with respect to these substances. Some of them are noted here –

1. A review on Bhang (Cannabissativa L) with respect to its therapeutic and pharmacological mechanisms were done by Dr Mitesh Singh Chauhan et. al., which is an example of Vyavayi action. The review gave a detailed information regarding the topic that was mentioned.
2. An article that read about the use of Cannabis for pain in Cancer patietns and are deprived of good life was done by Swagata Dilip Tavhare et.al., concluded that a judicious use of Cannabis is very effective in pain management of Cancer patients, reduction in weight loss, pain, anxiety, etc are relieved . The quality of like has also improved.

These studies show that bhang is having more of a systemic effect leading to Vyavyi action and also exhibiting a quicker effect on the body systems.

9.1.17. Vikasi

Definition –

सन्धिवन्धांस्तु शिथिलान्यत्करोति हि विकाशि तत् ।
विश्लेष्यौजश्च धातुभ्यो यथा क्रमुक कोद्रवाः ।। (S.S.Pu.4/20)
विकासी विकसन्नेव धातुवन्धान् विमोक्षयेत् । (S.S.Su 46/523)
विकासी विकसन्नेवं सन्धिवन्धान् विमोक्षयेत् । (A.S.Su.1/)
विकासि स्याद् सन्धिवनध विमोक्षयेत् । (K.N.Mishrakavarga 207)
विकासित्वं विकसनशीलत्वं सरत्वमिति यावत् । (Chakrapani Commentary on C.S.Ci.24/30)
विकासित्वादिति हिंसनशीलत्वात् विपूर्वोहि कसतिर्हिंसार्थः ।
(Chakrapani Commentary on C.S.Ci.23/24)

The action of the substance that have the ability to expand or spread quickly in a short span of time and then have the ability to loosen or dislodge the joints is known as Vikasi. The ability is very much seen in substances that have been classified as poisonous like Vatsanabha, Gunja, Bhang, Ahiphena, Langali, etc. Here the property of the substance facilitates easy penetration and spreading along with its interaction with the Ojus leading to its deficiency. The loss of Ojus will lead to different related disease conditions and other disturbances. The activity is mainly due to the predominance of Vayu Mahabhuta making it more invasive in action.

Unlike Vyavayi, the action is its ability to get diffused inside the system and not restricted to just absorption. Here the principles or properties of the substance is spontaneously transported across the biological membranes through transmembrane integral proteins. This method of diffusion is known as Facilitated passive diffusion. As a result there will a spontaneous spread into a part of the body or the whole body itself.

Modern contemporary pharmacological action – Drug absorption is determined by various factors which include properties, formulations, dosage forms, ingredients and even the routes of administration. On absorption, the distribution is dependent on the factors like polarity, size, binding abilities of the substance's principles, fluid status of the individual or the body condition. Hence to understand the said action it is quite difficult to be explained in modern terms. But these are having the ability to get absorbed quickly and also get metabolized such that they interact with the body cells. To establish a sharp and systemic effect on the body, the substance has to overcome the barriers of absorption and reach into the internal compartments of the body. Otherwise, the effects are confined to the local region itself. There are many types of absorption out of which the facilitated passive diffusion is a method of absorption which is a process where the molecules are moved across the biological membrane with the help of the proteins. The diffusion is based on temperature, concentration, diffusion distance and even size of the molecules. The permeation of the alkaloids like arecoline of Areacanut (Kramuka) through the Blood-Brain-Barrrier can be taken as an example of the same.

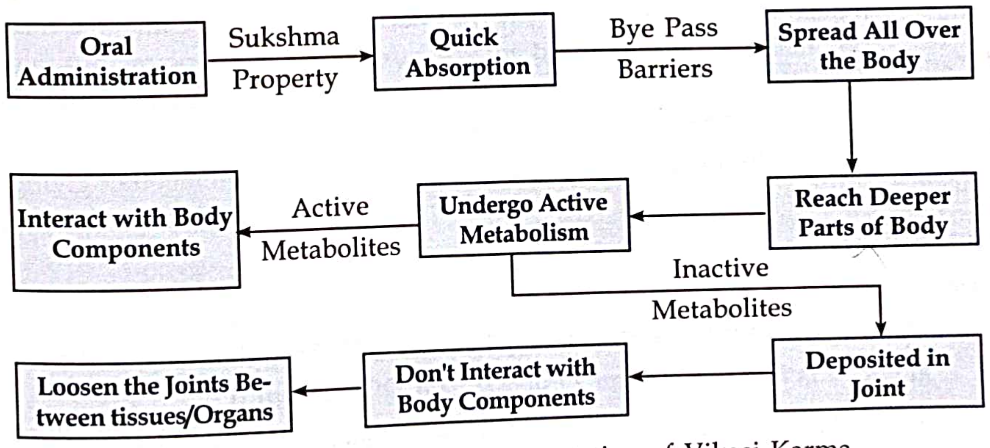

Figure No.21 Summarised presentation of Vikasi Karma

Thus the Vikasi action is understood in the following way:

a. System associated - mainly Circulatory system

b. Panchamahabhuta responsible - Vayu Mahabhuta

c. Rasapanchaka responsible - Tikta or Kashaya Rasa; Teekshna, Ushna, Laghu and Sukshma Guna; Ushna Veerya; Katu Vipaka

d. Contemporary pharmacological action - Multiple pharmacological action but can be equated to facilitated passive diffusion.

e. Examples - Kramuka (*Areca catechu* L.) and Kodrava (*Paspalum scrobiculatum* Linn)

f. Clinical Application - The clinical utility of the substances that exhibit the action of Vikashi is useful to have a deep penetration of substance in quicker span of time. Thus, they will be having the ability to be useful in many of the emergency cases. But presently as the two actions namely Vyavayi and Vikasi go hand in hand, the uses and applications of the two are nearly in the same conditions and treatment modalities.

g. Research Updates - Various researches pertaining to literary and experimental aspects are done on ghee especially cow's ghee. Some of them to be noted here are -

   1. A clinical study on Tamraparna (Tobacco) with respect to its anti-asthmatic effect was done by Dr Buddhadev S G and Dr. P P Sharma. The study drew conclusion that the plant was having a quick effect on inhalation by virtue of its Vyavayi, Vikasi and Teekshna Guna in a very minimal dose with reduced adverse effects. The study points out that even though tobacco use is injurious to health, a controlled and medicinal use is beneficial to treat certain disease conditions.

The study show the Vikasi and Vyavayi action are always seen together giving the necessary impetus to one another to bring out the quick effects.

9.1.18. Rasayana

Definition -

रसायनं च तज्ज्ञेयं यज्जराव्याधिनाशनम् । यथाऽमृता रुदन्ति च गुग्गुलुश्च हरीतकी ।। (S.S.Pu.4/23)

दीर्घमायुः स्मृति मेधामारोग्यं तरुणं वयः । प्रभावर्णस्वरौदार्यं देहेन्द्रियबलं परम् ।।

वाक्सिद्धिं प्रणतिं कान्तिं लभते ना रसायनम् । लाभोपायो हि शस्तानां रसादीनां रसायनम् ।।

(C.S.Ci.1/1/7-8)

The action of the substance to improve the body activities in such a manner that it results in postponement of old age, provides protection against diseases and provide optimum energy to perform all the tasks that one aspires is Rasayana.

The beneficial effects in detail are extended life which is of good quality having optimum memory, intelligence, health, youthful state of age, lusture, colour, deep soft voice, optimum strength of body and organs, highly convincing talk, humble nature and handsomeness are enlisted by Charaka.

The most important among the various effects is the maintenance of youthfulness and healthy condition of both body and mind is attributed to the substances listed as Rasayana. The action of Rasayana is concentrated to all the 7 Dhatu in an equal manner and not restricted to 1 among them. This results in an overall development of the body making it strong enough to prevent deterioration and also get affected from diseases. As per the involvement of substances this can be considered to be of two types namely

1. Ahara Rasayana - Food method
2. Aushadha Rasayana - Medicinal method
3. Achararasayana - Non medicinal method but with Healthy lifestyle, rhythmic activities and moral practices.

The Ahara Rasayana is that type of Rasayana where the food substance which are the main source of nutrition and energy are optimized in such a way that they give maximum benefits leading to maintenance of health and improve strength to the body. The dietic regimen mentioned in the context of Dinacharya and Ritucharya can be taken as examples for this type of Rasayana which highlights the flexibility and necessity of having which type of food in a particular time or season.

The Aushadha Rasayana is the that type of Rasayana where the medicinal substances are given to obtain the benefits pertaining to the action. Based on the type of medication, these are of 2 types namely

1. Multiple ingredient formulation
2. Single ingredient formulation

The multiple ingredient formulation are those that have more than one ingredient like Brahmarasayana, Chyavanaprasha, Narasimha Rasayana, Kushmanda Rasayana, Kamsahareetaki, etc. The Single ingredient formulation is the other

type which consists of different substances like Guduchi, Amalaki, Brahmi, Yashtimadhu, Bala, Bhallataka, Lohabhasma, etc. that are used for the purpose and have the required activity in them.

Based on the uses of these formulations, they can be classified into 2 types namely

1. Rasayana for the General health maintenance
2. Rasayana for the purpose of treating and avoiding relapse of a disease condition

The two groups of Rasayana are aimed for the fulfilment of the two main objectives of Ayurveda namely Swasthasya 'Swasthya Rakshanam' and 'Aturasya Vikaraprashamanam' respectively. Both the type of formulations is mentioned in each of these categories. For example, Chyavanaprasha, Brahmarasayana, Vardhamanapippali Rasayana, Lauha Rasayana, etc come under the first category while Kamsahareetaki is indicated in Shwasa, Kushmanda Rasayana in Rajayakshma, Lauha Rasayana in Pandu, Guduchi Churna as Medhya Rasayana, are some examples, that show the ability of curing diseases or atleast preventing them from getting relapsed. Again, based on the method of administration or treatment modality, it can also be reclassified into two categories namely,

1. Kutipraveshika – Inhouse or Inpatient method of medicinal administration
2. Vatatapika – Outdoor or Outpatient method of medicinal administration

The Kutipraveshika type of modality is where a special Kuti (Hut) is arranged for the purpose and the person who wants to have the therapy or medication is made to stay in it for a specific period of time. Here the individual is not allowed to go out till the period of stay is completed. In Vatatapika type of modality, the individual will be given the medication and is allowed to continue the routine activities as usual.

रसानां रसरक्तादिनामयनमाप्यायनं रसायनम् । रसानां रसवीर्यविपाकादिनामायुः प्रभरतिकारणानामयनं विशिष्ट लाभोपायो रसायनं तदर्थं तन्त्रं रसायनतन्त्रम् । (Dalhana Commentary on S.S.Su.1/7)

The Rasayana action is also called by the names pathya, swasthyorjaskara, Vayasya and Vayastha.All the names are explaining the ability of the medicine, food or lifestyle or practices that can elongate quality life on the individual due to the effect of the substances.

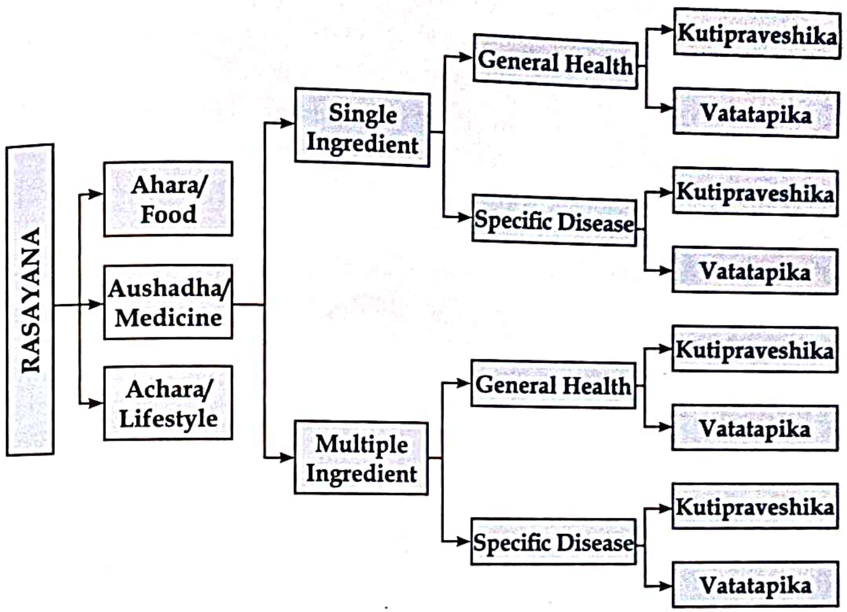

Figure No. 22 Classification of Rasayana Karma

Modern contemporary pharmacological action – The most common action that has been associated is the Anti-oxidantactivity. The other activities like like Immunomodulators, Adaptogenic or Anti-stress, Cytoprotective, Nooprotective and even anabolic enhancers.

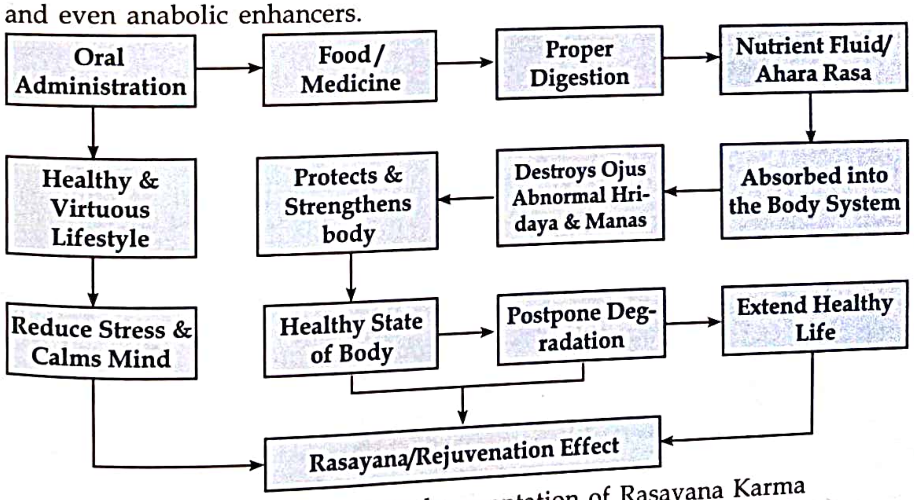

Figure No.23 Summarised presentation of Rasayana Karma

Thus the Rasayana action is understood in the following way:

a. System associated – All the systems of the body
b. Panchamahabhuta responsible – Prithvi & Jala Mahabhuta.
c. Rasapanchaka responsible – Madhura or Amla Rasa; Guru, Snigdha Guna; Sheeta Veerya; Madhura Vipaka
d. Contemporary pharmacological action – Rejuvenator, Antioxidant, Adaptogenic, Immunomodulator, etc
e. Examples – Rudanti (*Cressa cretica* L), Guggulu (*Commiphora mukul* (Stocks) Hook.) and Haritaki (*Terminalia chebula* Retz.).
f. Clinical Application – The clinical application of Rasayana action is having a wide base as it envisages many activities into itself starting from immunomodulation to anabolic enhancement. The substances like Ashwagandha, Yashtimadhu, Bala are very well known for its anabolic enhancement and adaptogenic activities. These are very commonly used as the component of Rasayana medicines too. Based on the need one has to choose the respective Rasayana substance so as to have an optimised benefit for a given condition.
g. Research Updates – The researches pertaining to the action of Rasayana is not on the complete aspect but is pertaining to some of the activities like Immunomodulatory effect, Antioxidant effect, Adaptogenic effect, etc. Some of them are noted here–
    1. A detailed review article on the concept of Rasayana and its applicability in current times was done by Dr Deshpande Vaishali Shailesh and Dr. Deshpande Shailesh Vinayak concluded that it is a novel treatment modality of Ayurveda which is focused on achieving the hemostasis of the body components. Hence a proper understanding and application will lead to a precise treatment giving utmost benefits on the health of the individual.
    2. A study on the methanol extract of Ashwagandha leaves done by Mr. Ajay Pal showed that it exhibited marked anti-oxidant effect which would be very useful for the preparation of Anti-oxidant rich neutraceuticals.
    3. A detailed review on Amalaki by Dr. Pravin M Bhat concluded that the plant has multiple benefits ranging from antiageing to cytoprotective, antidiabetic, etc. making it one of the most used substances for treatment in Ayurveda. The review also concluded that promote energy and improve the healthy state of the body making it one of the most useful substance.

There are lot of studies that highlight the different activities named under Rasayana as benefits which is just mentioned here as examples. It is one of the most novel modality of Ayurveda which is now being seen as a most important contribution to medical science.

9.1.19. Vajikarana

Definition –

यस्माद्द्रव्याद्भवेत्स्त्रीषु हर्षो वाजीकरं च तत् । यथा नागबलाद्याः स्युर्बीजं च कपिकच्छुकम् ।। (S.S.Pu.4/14)

येन नारीषु सामार्थं वाजीवल्लभते नरः । व्रजेच्चाभ्यधिकं येन वाजीकरणमेव तत् ।। (C.S.Ci.2/4/51)

वाजीवातिबलो येन यात्यप्रतिहतोऽङ्गना ।। भवत्यतिप्रियः स्त्रीणां येन येनोपचीयते ।

तद्वादीरकणं तद्धि देहस्योर्जस्करं परम् ।। (A.H.Ut.40/2-3)

The action of the substance that is responsible for the increase in the ability of the sexual drive in an individual to the level of a horse is known as Vajikarana. It also extends to the ability of an individual to fulfil the sexual requirement of the opposite gender completely. This set of medications are considered under the heading of Dehorjaskara such that it is responsible to increase and maintain the health of the body.

The action Vajikarana is mainly on the Shukradhatu of the body, it nourishes all the dhatus of the body. This is due to the fact that the Shukradhatu is the last one among the seven and the nourishment which reaches to it will have to be passing through the compartments of all Dhatus. Thus, the nourishment of the earlier takes place by default when it crosses over to the next one. Hence, even though Vajikarana is considered to be a substance that effects the Shukradhatu, it basically nourishes all the Dhatus of the body.

वाजीकरण तन्त्रं नामाल्प दुष्ट क्षीण विशुष्क रेतसामाप्यायन प्रसादोपचय जननिमित्तं प्रहर्षजननार्थं च । (S.S.Su.1/8)

Sushruta while defining the benefits of Vajikarana tantra which is a branch of Ayurveda highlights that the branch of science is focused towards the cleaning or purifying Shukra, increasing the depleted Shukra and Dry or less moist Shukra that help in attaining of the equilibrium. This status is necessary for having a healthy body and good quality of life such that it becomes easier to have a very healthy sexual interaction. This also ensures healthy psychological conditions which is very much required along with healthy body to have a healthy interaction leading to a healthy progeny.

The action is also known by the names Vrishya, Vajikara, Shukrala and Shukra-

janana. All these names are directed towards its effect on the Shukradhatu as it is the main Dhatu that is getting affected leading to its increase. Like the action Rasayana, even this action is classified into six types namely –

1. Shukrala
2. Shukrajanana
3. Shukrarechana
4. Shukrapravartana
5. Shukrastambhana
6. Shukrashoshana

The substances like Ashwagandha (Withania somnifera Dunal), Musali (Asparagus adescendans Roxb & Curculigoorchioides Gaertn), Sharkara (Sugarcandy), Shatavari (Asparagusracemosus Willd.), etc. which exhibit the action Shukrala is the condition where the Shukradhatu is being increased in qantity and quality. The substances include increase in the quantity by supplementation and ensuring the quality by clearing the Shukradosha like Atidrava (Thin fluid), Kunapagandhi (Foul smell), Phenila (Frothy), Grathita (coagulated or mass), Picchila (Slimy), etc

यस्माच्छुक्रस्य वृद्धिः स्याच्छुक्रलं तु तदुच्यते । यथाऽश्वगन्धा मुसली शर्करा च शतावरी ।। (S.S.Pu.4/15)

यस्मात् द्रव्यात् शुक्रस्य वृद्धिः स्यात् तत् शुक्रलं स्यात् । (Adhamalla Commentary on S.S.pu.4/15)

The action is infact comprise of both increase in quantity and improve the quality but as there is another action Shukrajanana is being mentioned, this we can consider to be more focused towards improvement of quality than just increase in quantity while Shukrajanana is more focused on increase of quantity than just improvement of quality.

As described, the Shukrajanana is increase in quantity of Shukra which refers mainly to the production of Shukradhatu. In Ayurveda, the production of Shukradhatu is said to be the last among the Dhatus and is formed from the Majja Dhatu. The main factor that results in the production of Shukradhatu is Shukradhatwagni which metabolises the precursor present in the Majjadhatu. The precursor is said as the sneha (Moisture or fat) that is present in Majjadhatu which forms the necessary ingredient for production of Shukradhatu. On formation, it oozes out and spreads all over the body for the sustenance and reproduction of cells. Substances with the action of Shukrajanana like Dugdha,will interfere in any of these steps such that the production of Shukradhatu is increased quantitatively.

न केवलं प्रवर्तकानि उत्पादकराणि च कथ्यन्ते प्रभावात् । (Adhamalla Commentary on S.S.Pu.4/16)

शुक्रक्षये क्षीरसर्पिषोरुपयोगो मधुरस्निग्धसमाख्यातानां चापरेषां द्रव्याणाम् । (C.S.Sh.6)

दुग्धं माषाश्च भल्लातफलमज्जामलानि च । प्रवर्तकानि कथ्यन्ते जनकानि च रेतसः ।। (S.S.Pu.4/16)

प्रवर्तनी स्त्री शुक्रस्य ....। (S.S.Pu.4/17)

तदेव चेष्टयुक्तेर्दशनात् स्मरणादपि । शब्दसंश्रवणात् स्पर्शात् संहर्षाच्च प्रवर्तते ।। (S.S.Ni.10/20)

The Shukrapravartana is the action that helps in the process of expulsion of Shukradhatu in the form of Retas or semen. The various activities like Chesta (movements), Darshana (sight), Smarana (rememberence), Shabda (sound), Shravana (hearing the speech), Sparsha (touch) and Harsha (pleasure) all are the ones that result in Shukrapravartana in the form of Retas or Semen. All the activities are only possible in living ones thereby considered the opposite gender to be the cause of Shukrapravartana. As the males are the ones who expel the retas or semen, the stri is considered to be the gender who is the best one for initiating the process.

............................रेचनं बृहतीफलम् । (S.S.Pu.4/17)

The Shukrarechana is the action of the substance like Brihati (Solanumindicum Linn) that facilitates easy ejaculation of Retas or semen. The action is more on increasing the quantity of ejaculation rather than increase in production.

जातीफलं स्तम्भकं.......................... । (S.S.Pu.4/18)

The Shukrastambhaka is the action of the substances like Jatiphala (Myristica fragrans Houtt.) where the ejaculation is delayed. The premature ejaculation may occur due to psychological conditions like anxiety, weakness of pelvic muscles or even erectile dysfunction. The substances that are considered as Shukrastambhaka will be mainly useful on anxiety or other related psychological conditions. Along with this, there may be actions on erectile dysfunction and strengthening of pelvic muscles too.

..........................च शोषणी च हरीतकी । (S.S.Pu.4/18)

.......क्षारः पुंस्त्वोपघातिनाम् ....। (C.S.Su.25/40)

The Shukrashoshana is the action of the substance like Hareetaki (Terminaliachebula Retz) to decrease the production of Shukra and ejaculation of Retas. The action is in two stages namely, first it hampers the production of Shukra by disturbing the factors responsible for it to be produced and second is it decreases the quantity of Retas that is being ejaculated. The action will result in Vandyatva (temporary sterility) of Pumsopaghata or Napumsatva (permanent

sterility) if taken in excess but is useful to reduce certain conditions that are both psychological and physiological nature contributing to excessive sexual drive.

Modern contemporary pharmacological action – The most common action that has been associated is the Aphrodisiac activity. But other actions like Spermatogenesis, Semen thinner and Spermacidal activities are also having the similar effects. Most of these are generally having psychological effects or even effects on hormones like FSH, LH, Esterogen and Progesterone that are mainly responsible for influencing the physiology of reproductive system.

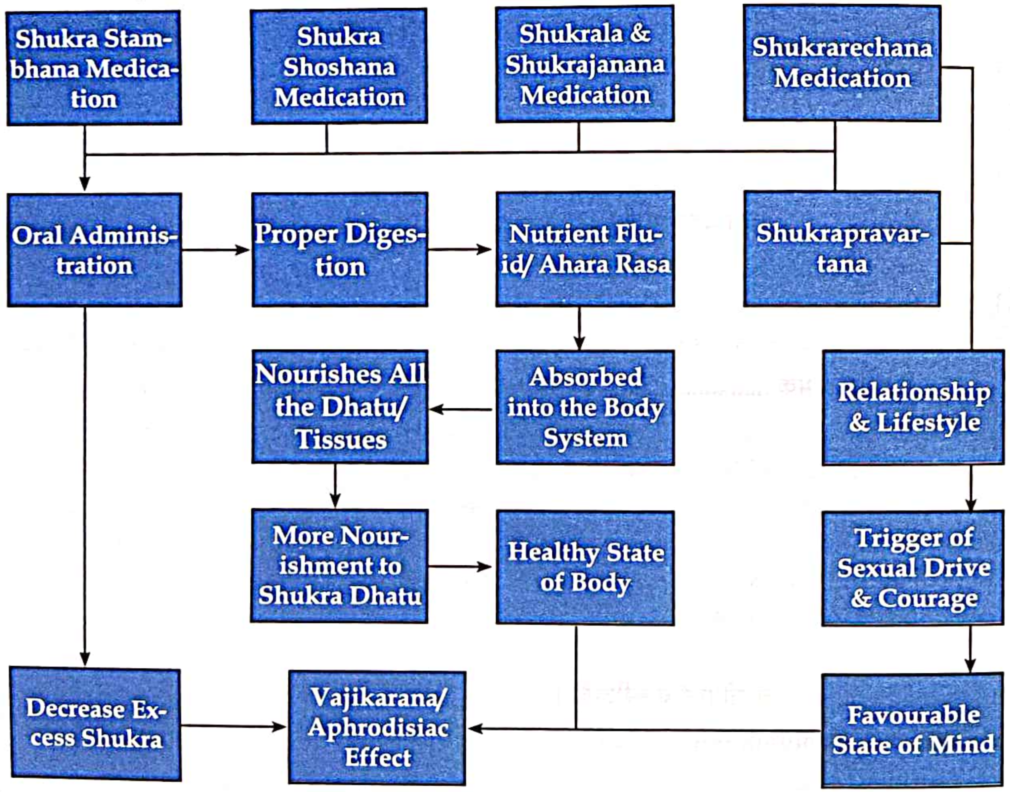

Figure No.24 Summarised presentation of Vajikarana Karma

Thus the Vajikarana action is a complex one involving many physiological, neruological, and psychological factors into it. This can be briefly understood in the following way:

a. System associated–mainly Reproductive System
b. Panchamahabhuta responsible– Prithvi&Jala Mahabhuta
c. Rasapanchaka responsible – Madhura or Amla Rasa; Guru, Snigdha Guna; Sheeta Veerya; Madhura Vipaka
d. Contemporary pharmacological action – Aphrodisiac
e. Examples – Ashwagandha (*Withania somnifera Dunal*), Musali (*Asparagus adescendans* Roxb & *Curculigo orchioides* Gaertn), Sharkara (Sugarcandy), Shatavari (*Asparagus racemosus* Willd.).
f. Clinical Application – Sexual disorders is one of the main problems of today. Due to altered lifestyle and food, people are stressed to an extent that they loose the sexual drive and also the improper food habits have led to improper production of shukradhatu. Thus, the proper understanding and evaluation of the condition is necessary to consider the type of medication that is being used for optimum results. Even though the Vajikarana is an action, it has assumed the status of a branch in Ayurveda because of the variety in generating the effect. The types mentioned under them needs to be evaluated carefully for proper selection and understanding so as to obtain the desired results.
g. Research Updates – The branch of Vajikarana is the one that commonly deals with the pharmacological action. It being the most sought medical condition, there is extensive research conducted on various substances that have been mentioned to produce the effect. Some of them to be noted here are –
   1. A detailed review of Vajikarana was done by Dr. Piyush Chaudry et al., which included the literary evaluation different substances that are used under the Vajikarana therapy. The study concluded that these substances have an effect on the Pituitary gonadal axis, vasodilatation and even altering testosterone levels.
   2. A review on the conceptual study of Vajikarana with respect to Ayurveda was done by Dr. Prashanth Rajaram Shirke concluded that the substances that are to produce the optimum effect of Vajikarana, Samshodhana of the body is necessary. Else the Ama or toxic substances present in the body generated due to metabolism will be hindering the flow of action helpful to generate the desired effects.

These studies show that the action Vajeekarana is having a multiple system involvement and has varied methods of action even though the final effects are nearly the same. Thus, evaluation of the cause for the given condition is very much necessary for the better choice of substance such that the final desired effect is obtained.

9.1.20. Medhya

Definition –

मेधायै हितं मेध्यम् । (D.G.P.V.Sharma vol 1)

The action of the substance that results in the increase of Medha (Intelligence) is known as Medhya. Medha or intelligence is the higher function of the mind that includes three different functionalities namely Dhi (Analytical thinking), Dhruti (Determinator or Retention) and Smriti (Memory). All the three functionalities are having their own applications. Accordingly, Dhi gives a proper analysis and understanding which helps one to have a better approach and application of the knowledge that is obtained. It also helps in gaining the correct knowledge due to in-depth analysis. On the other hand the Dhruti is the one that helps one to have courage and determination such that they strive continuously in a very focused manner so as to achieve a given goal or objective. Finally, Smriti is the memory that acts as a reservoir ready reference of knowledge and experience which is used by both Dhi and Dhriti in their process of functioning. The substances that enhance any of the three comes under the category of Medhya. The functionality of the three is dependent on 2 factors namely Tridosha (Vata, Pitta & Kapha) and Manasika Gunas (Satva, Rajas & Tamas). As these are interlinked to each other with Pitta Dosha affecting Satva, Vata affecting Rajas and Kapha affecting Tamas, the substances when used will affect the Dosha which inturn shows effects on the Manasika gunas also. According to the predominant Guna, the functioning of the mind takes place. With respect to Medhya activity, it is the three namely Dhi, Dhruti and Smriti that is more focused. Here the function of Dhi and Smriti is attributed to both Satva and Rajasika Guna while Dhriti is attributed to Satva and Tamasika Guna. As a result, the involvement of the Pittadosha in all these functionalities cannot be ruled out. Specifically there is involvement of Alochaka Pitta and Tarpaka Kapha that result in the functionalities of mind especially the three high.

When we enlist the Medhya substances we observe that they are belonging to groups that contain either Sheetaveerya or Ushnaveerya. This shows the variety that is needed to achieve the significant affect. Some of the examples of Sheetaveerya substances mentioned as Medhya are Kushmanda (*Benincasa-hispida* (Thunb) Cogn), Shankhapushpi (*Convolvulus pluricaulis* Choisy), Brahmi (*Centella asiatica* (L) Urban), etc while the Ushnaveerya substances are Aindri (*Bacopa monneri* (L) Wettst), Jatamamsi (*Nardostachys jatamamsi* DC), Jyotishmati (*Celastrus paniculatus* Willd), etc.

The relevant effect exerted on the Pitta or the Kaphadosha by these substances will effect the relative Manasaguna leading to the generation of Medhya effect. According to the Veerya of the substance, the Ushnaveerya substance will enhance Dhi and Smriti while the Sheetaveerya substance will be useful in the enhancement of Dhriti particularly.

प्रभा प्रसादो मेधा च पित्तकर्माविकारजम् । (C.S.Su.18/50)

क्षमा धृतिरलोभश्च कफकर्माविकारजम् । (C.S.Su.18/51)

Modern contemporary pharmacological action – The most common action that has been associated is the CNS stimulants and Cognition enhancers. But other actions like CNS stimulants, drugs that effect the cerebral cortex, Excitatory Amino Acids, Dopaminergic agonist, etc that have the ability to affect the memory conditions along with thinking and other related functions of brain.

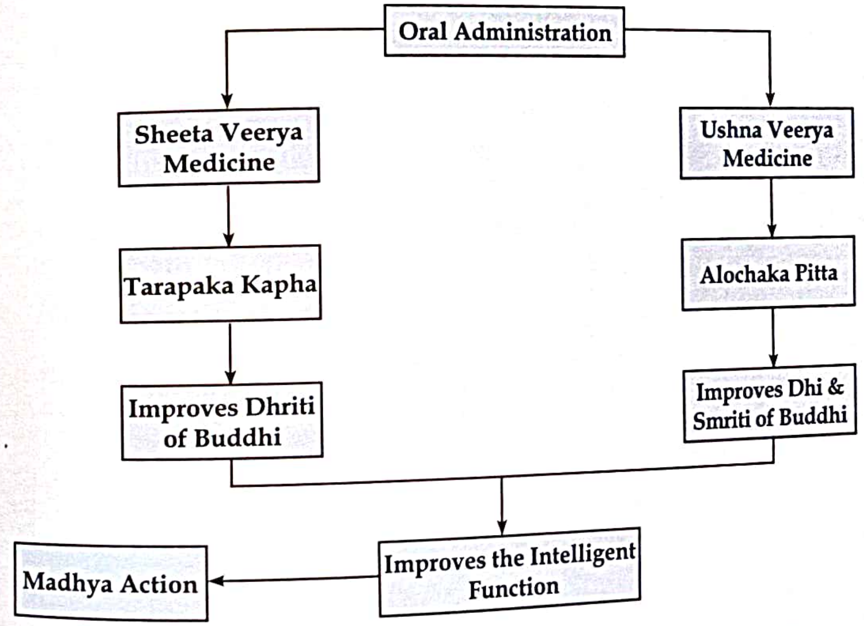

Figure No.25 Summarised presentation of Medhya Karma

Thus the Deepana action is understood in the following way:

a. System associated–mainly Central Nervous System

b. Panchamahabhuta responsible– Jala & Agni Mahabhuta; Mainly Agni Mahabhuta

c. Rasapanchaka responsible – Madhura, Amla or Katu Rasa; Laghu, Snigdha, Teekshna and Sukshma Guna; Sheeta or Ushna Veerya; Madhura Vipaka; Medhya Prabhava.

d. Contemporary pharmacological action – Cognition enhancers, CNS Stimulants

e. Examples – Jatamamsi (*Nardostachys jatamansi* DC.) and Brahmi (*Centella asiatica* (L) Urban)

f. Clinical Application – The variety in the substances that have the action as Medhya shows the administration of these needs a careful evaluation of the condition where it is being used. Even the necessary cognitive and memory tests will give an idea as what is exactly necessary for the individual and which type of substance is to be administered. If it is a condition that needs the modulation of Dhi and Smriti, then Ushnaveerya substances that effect the Pittadosha is to be provided. Similarly if the condition needs modulation of Dhriti, then Sheetaveerya substances that effect the Kaphadosha is to be provided. Moreover, the understanding of the action is only to bring the same into normalcy and not to change or modulate the functions that are associated with the Prakriti of the individual.

g. Research Updates – The researches on Medhya action is based on both literature and evidence based. Some of them to be noted here are –

1. A review on the Ayurvedic herbs that are said to have Medhya effect was done by Dr. Reena Kulkarni et.al. The study concluded that the herbs act on the basis of antioxidant, adaptogenic or essential trace elements present in them.
2. A review of pharmacological and pharmacodynamic action of Herbal medhya plants mentioned in mental disorders mentioned in Ayurveda by Dr. Pooja Sambhaji Panchaware et. al. The study concluded that the Medhya dravyas improves the cognitive function in brain and also helps in regeneration of neuronal tissues of the brain. It also acts as anti-inflammatory, anti-stress, etc which are helpful in providing the required effect of Medhya.

The studies suggest that the action of Medhya involves multiple pathways and depends even though the effect is nearlythe same.

9.2. Glossary

To summarize the chapter here are the few important points –

- An action is a simultaneous process of disjunction and conjunction with one another which may be within the substance or between the substance.

- All actions or Karma can be classified into two types namely Pradhana Karma (Main or Primary actions) and Gauna Karma (Secondary actions).

The summarized table of all the actions mentioned in the chapter.

Action	Modern equivalent	System involved	Example
Deepana	Appetizer or Appetite stimulant	Digestive System & Cellular Metabolism	Mishi & Ghrita
Pachana	Digestive or Digestants	Digestive System & Cellular Metabolism	Nagakeshara, Musta
Samshodhana	Multiple actions	Digestive System, Skin and Circulatory system	Madanaphala, Devadali
Samshamana	Multiple actions	Primarily - main system where the substance is administered related to the disease condition, secondarily - whole body.	Guduchi, Eranda, Chandana, Maricha
Anulomana	Carminative or Aperient	Digestive System	Hareetaki
Sramsana	Stimulant laxative, Surface active agents & Prokinetic agents.	Gastro-Intestinal Tract	Kritamala, Sonamukhi
Bhedana	Emollient agents, Irritant and Stimulant purgatives	Digestive System	Katuki, Amlavetasa
Rechana	Purgatives	Digestive System	Trivrit, Snuhiksheera and Erandataila
Chedana	Mucolytic, Antiatherosclerotic & Expectorants	All parts of the body	Maricha, Shilajatu, Kshara
Lekhana	Hypolipidemic	All parts of the body	Kshaudra, Ushnajala, Vacha & Yava
Grahi	Absorbant	Digestive System	Shunti, Jeeraka and Gajapippali

Stambhana	Anti-diarrhoeal, Styptic	All pathways in the body	Vatsaka, Tuntuka
Madakari	Intoxication	Nervous system	Madya, Sura, Bhang, Ahiphena
Pramathi	Multiple actions	All pathways in the body	Maricha, Vacha
Abhishyandi	Multiple actions	All the pathways in the body	Dhadhi, Panasa
Vyavayi	Passive Diffusion	Circulatory system	Bhang, Ahiphena
Vikasi	Facilitated Passive Diffusion	Circulatory system	Karmuka, Kodrava
Rasayana	Rejuvenator, Adaptogenic, Immunomodulator, Antioxidant, etc	All systems of the body.	Rudanti, Guggulu, Hareetaki
Vajikarana	Aphrodisiac	Reproductive System	Ashwagandha, Musali, Sharkara, Shatavari.
Medhya	Cognition enhancers & CNS Stimulant	Central Nervous system	Jatamamsi, Brahmi

9.3. EXERCISE

Long Answers

1. Define Karma. Explain its classification and general modality of Karma as explained by Charaka.
2. Define Samshodhana and Samshamana Karma and explain the modality of Nasya karma in detail
3. Explain Rasayana and Vajeekarana karma in detail with examples.
4. Define Karma. Explain Anulomana, Sramsana, Bhedana and Rechana Karma in detail.
5. Explain the Vamana, Virechana and Nasya action in detail

Short Answers

1. Define and explain Deepana and Pachana with suitable examples
2. Define and explain Grahi and Stambhana with suitable examples

3. Define and explain Vyavayi and Vikasi with suitable examples
4. Define and explain Chedana and Pramathi with suitable examples
5. Define and explain Lekhana and Medhya with suitable examples

Multiple Choice Questions

1. Which type of Pitta is associated with Medha?
   a. Alochaka b. Ranjaka c. Brajaka d. Sadaka
2. Which type of Kapha is associated with Medha?
   a. Shleshaka b. Tarpaka c. Bodaka d. Avalambaka
3. Which action is associated with the digestion of Ama only?
   a. Deepana b. Grahi c. Pachana d. Stambhana
4. Which action that results due to Ruksha, Sheeta and Kashaya properties?
   a. Pramati b. Medhya c. Grahi d. Sthambhana
5. Which action is resulted due to Picchila, Guru guna?
   a. Abhishyandi b. Stambhana
   c. Grahi d. Medhya
6. Which substance in the list is an example for Shukrarechana?
   a. Kapikacchu b. Brihati c. Nagakeshara d. Hareetaki
7. Which modern action is associated with Bhedana?
   a. Emollient agents b. Carminative
   c. Drastic purgatives d. Bulk laxative
8. Which action is the Rudanti said as an example?
   a. Vajikarana b. Medhya c. Rasayana d. Sthambhana
9. Which substance is the example for Medhya Rasayana?
   a. Guduchi b. Brahmi c. Yashtimadhu d. All the above
10. Ushnajala or hotwater is an example of ________?
    a. Grahi b. Lekhana c. Stambhana d. Chedana

Answer Key

1 a	2 b	3 c	4 d	5 a	6 b	7 a	8 c	9 d	10 b

Stambhana	Anti-diarrhoeal, Styptic	All pathways in the body	Vatsaka, Tuntuka
Madakari	Intoxication	Nervous system	Madya, Sura, Bhang, Ahiphena
Pramathi	Multiple actions	All pathways in the body	Maricha, Vacha
Abhishyandi	Multiple actions	All the pathways in the body	Dhadhi, Panasa
Vyavayi	Passive Diffusion	Circulatory system	Bhang, Ahiphena
Vikasi	Facilitated Passive Diffusion	Circulatory system	Karmuka, Kodrava
Rasayana	Rejuvenator, Adaptogenic, Immunomodulator, Antioxidant, etc	All systems of the body.	Rudanti, Guggulu, Hareetaki
Vajikarana	Aphrodisiac	Reproductive System	Ashwagandha, Musali, Sharkara, Shatavari.
Medhya	Cognition enhancers & CNS Stimulant	Central Nervous system	Jatamamsi, Brahmi

9.3. Exercise

Long Answers

1. Define Karma. Explain its classification and general modality of Karma as explained by Charaka.
2. Define Samshodhana and Samshamana Karma and explain the modality of Nasya karma in detail
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4. Define Karma. Explain Anulomana, Sramsana, Bhedana and Rechana Karma in detail.
5. Explain the Vamana, Virechana and Nasya action in detail

Short Answers

1. Define and explain Deepana and Pachana with suitable examples
2. Define and explain Grahi and Stambhana with suitable examples

3. Define and explain Vyavayi and Vikasi with suitable examples
4. Define and explain Chedana and Pramathi with suitable examples
5. Define and explain Lekhana and Medhya with suitable examples

Multiple Choice Questions

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10. Ushnajala or hotwater is an example of ________?
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Answer Key									
1 a	2 b	3 c	4 d	5 a	6 b	7 a	8 c	9 d	10 b

Bibliography

1. Sharma P. V. (1984). Dravyaguna Vignyana. Varanasi. Chaukhambha Bharati Academy.
2. Agnivesha (1998). Charaka Samhita (Vol 1-2). Redacted by Charaka: Hindi commentary by Kashinatha Shastri, Gorakhanatha Chaturvedi: Rajeshwaradatta Shastri, Yadunandana Upadhaya, Ganga Sahaya Pandeya, Banarasidasa Gupta (eds), Varanasi. Chaukhambha Bharati Academy.
3. Mishra Y.C. (2004). Padartha Vijnana. Acharya Jyotirmitra (ed), Varanasi. Chaukhambha Sanskrit Bhavan.
4. Agnivesha (2002). Charaka Samhita (2nd ed., Vol 1-5). Redacted by Charaka: Sanskrit commentary Ayurvedadipika by Chakrapani, Jalpakalpataru by Gangadhar: Sengupta Narendranath, Sengupta Balaichandra (eds), Varanasi. Chaukhambha Orientalia.
5. Vagbhata (1997). Astanga Sangraha (12th ed.). Hindi commentary Vidyotini by Atrideva Gupta: Yadunandana Upadhyaya (ed.), Varanasi. Chaukhambha Sanskrit Sansthan.
6. Kallianpur Supriya, Gokarn Rohit (2019). A text book of Dravyaguna Vijnana (1st ed., Vol 1-2). Varanasi. Chaukhambha Orientalia.
7. Shastry J.L.N., Nesari M. Tanuja. (2019). A text book of Dravyaguna Vijnana (Reprint., Vol 1-2). Varanasi. Chaukhambha Orientalia.
8. Sushruta (1997). Sushruta Samhita (11th ed., Vol 1-2). Hindi commentary Ayurveda tattva sandipika by Ambikadutta Shastri, Varanasi. Chaukhambha Sanskrit Sansthan.
9. Acharya, Y.T. (1997). Dravyaguna Vijnanam (7th ed., Vol 1-2). Nagpur. Shree Baidyanath Ayurved Bhavan Limited.
10. Sharma, H., Zhang, X., & Dwivedi, C. (2010). The effect of ghee (clarified butter) on serum lipid levels and microsomal lipid peroxidation. Ayu, 31(2), 134.
11. Priya, G., Dwivedi, P. K., & Singh, A. K. (2019). Ghrita as a carrier system for Drug Delivery in Ayurveda across Blood Brain Barrier. Eastern Scientist, 38.
12. Delgoffe, G. M., & Powell, J. D. (2015). Sugar, fat, and protein: new insights into what T cells crave. Current opinion in immunology, 33, 49–54.
13. Dwivedi Vishwanath (1986). Aushadhi Vijnyana Shastra (3rd ed.). Nagpur. Shree Baidyanath Ayurved Bhavan Limited.
14. Satoskar R.S., Bhandarkar S.D., Nirmala N. Rege (2005). Pharmacology and Pharmcotherapeutics (19th ed.). Mumbai. Popular Prakashan Private Limited.
15. K.D. Tripathi (2013). Essentials of Medical Pharmacology (7th ed.). New Delhi. Jaypee Brothers Medical Publishers (P) Ltd.
16. Rajani, A., Vyas, M. K., & Vyas, H. A. (2010). Comparative study of Upavasa and Upavasa with Pachana in the management of Agnisada. Ayu, 31(3), 351–354.
17. Ashok Kumar B.N., Sudheendra Honwad, B. Ravishankar, Sneha Pai, & Shiv Om Dixit. (2016). Experimental evaluation of Deepana and Pachana Activity of Chitraka Kwatha w.s.r. to different Reduction Criteria. Journal of Ayurveda and Integrated Medical Sciences, 1(04), 42-51.

18. Singh, V., Shrivas, A., Pandey, S., & Ram, B. (2019). Conceptual Interpretation and Applied Facet of Deepana and Pachana. International Journal of Innovative Knowledge Concepts, 7 (1), 131-138.
19. Thakur Krittika, Toshikane Sangeeta H., Sahu Ravi, Patel Rinal (2021). Role of Deepana-Pachana in Panchakarma: A Review. Global Journal for Research Analysis, 10(2). 1-4.
20. Gupta, B., Mahapatra, S. C., Makhija, R., Kumar, A., Jirankalgikar, N. M., Padhi, M. M., & Devalla, R. B. (2012). Physiological and biochemical changes with Vamana procedure. Ayu, 33(3), 348–355.
21. Chaudhari, B. A., & Chavan, A. B. (2016). Panchakarma Perception-An Overview. Journal of Ayurveda and Integrated Medical Sciences, 1(01), 46-51.
22. Mangal, G., Mangal, G., & Sharma, R. S. (2012). Clinical efficacy of Shodhana Karma and Shamana Karma in Mandala Kushtha (Psoriasis). Ayu, 33(2), 224–229.
23. Nidhin P S, Yaligar M.G., Arunraj G. R., Anushree D., (2016). Assessment Of Anulomana Karma Of Harithaki (Terminalia Chebula Retz.) And Rechana Karma Of Trivrit (Operculina Turpethum L.) On Intestinal Motility By Charcoal Meal Test. International Journal of Research in Ayurveda & Pharmacy, 7 (3), 36-39.
24. Hiremath V, Kushwaha IS, Shubha M, Rao S R (2020). Review article on Bhedaneeya Mahakashaya. J Community Health Manag, 7(4):100-105.
25. Chaturvedi A, Rao PN, Kumar MA, Ravishankar B, Rao N, Ravi M (2016). Effect and Mechanism of Virechana Karma (Therapeutic Purgation) Over Fructose-Induced Metabolic Syndrome: An Experimental Study. Journal of Evidence-Based Complementary & Alternative Medicine, 21(3):194-201.
26. Chaturvedi, A., Nath, G., Yadav, V. B., Antiwal, M., Shakya, N., Swathi, C., & Singh, J. P. (2019). A clinical study on Virechana Karma (therapeutic purgation) over the gut flora with special reference to obesity. Ayu, 40(3), 179–184.
27. Rais, A., & Bhatted, S. (2013). Clinical study to evaluate the effect of Virechanakarma on serum electrolytes. Ayu, 34(4), 379–382.
28. Sunita Shiraguppi, N. B. Mashetti, Rakeshkumar S. Gujar, P. G. Gannur, Vijaylaxmi Hadimani (2019). A clinical comparative study of Chedana Paschat Arka Pratisaraeeiya Kshara & Agnikarma in the management of Kadara (Corn). J Ayurveda Integr Med Sci., 4 (5),25-32.
29. Syed Abdul Wahid & Arvind Gajbhiye (2021). A Comparative Clinical Study Of 'Chedana Karma & Ksharsutra (Seton) Karma' (Guggulu Based) In The Management Of Shalyaj Nadi Vrana (Sinus) W.S.R. To Pilonidal Sinus (Associated With Ropan Lepa). International Ayurvedic Medical Journal, 327-334.
30. Merriam-Webster. (n.d.). Curettage. In Merriam-Webster.com dictionary. Retrieved October 20, 2023, from https://www.merriam-webster.com/dictionary/curettage.
31. Kumari, H., Pushpan, R., & Nishteswar, K. (2013). Medohara and Lekhaniya dravyas (anti-obesity and hypolipidemic drugs) in Ayurvedic classics: A critical review. Ayu, 34(1), 11–16.

32. Chu, E. C. P., Wong, A. Y. L., Sim, P., & Krüger, F. (2021). Exploring scraping therapy: Contemporary views on an ancient healing - A review. Journal of family medicine and primary care, 10(8), 2757–2762.

33. Harleen Kaur Sethi, Rosy Gupta (2023). A clinical study to evaluate the efficacy of Vacha (Acorus calamus) in the management of Sthaulya with special reference to Hyperlipidemia. J Ayu Int Med Sci., 8(2):30-38.

34. Institute of Medicine (US) Committee on Military Nutrition Research; Marriott BM, editor. Fluid Replacement and Heat Stress. Washington (DC): National Academies Press (US); 1994. 2, Use of Electrolytes in Fluid Replacement Solutions: What Have We Learned From Intestinal Absorption Studies? Available from: https://www.ncbi.nlm.nih.gov/books/NBK231118/

35. Patel, M. V., Patel, K. B., & Gupta, S. N. (2010). Effects of Ayurvedic treatment on forty-three patients of ulcerative colitis. Ayu, 31(4), 478–481.

36. Patil, A. K., & Sawant, P. S. (2018). Comparative Study Of Shunthyadi Churna & Latakaranj Churna In The Management Of Aamatisara. World Journal of Pharmaceutical Research, 7 (5), 723-733

37. Daneshwari Kanashetti, & Kamal Nayan Dwivedi. (2020). A Critical Review On Stambhana And Grahi Karma: Concept Based Treatment Modalities. International Journal of Ayurveda and Pharma Research, 8(9), 41-48.

38. Chung, K. T., Wong, T. Y., Wei, C. I., Huang, Y. W., & Lin, Y. (1998). Tannins and human health: a review. Critical reviews in food science and nutrition, 38(6), 421–464.

39. Neal, D. J., & Carey, K. B. (2007). Association between alcohol intoxication and alcohol-related problems: an event-level analysis. Psychology of addictive behaviors : journal of the Society of Psychologists in Addictive Behaviors, 21(2), 194–204.

40. Wong, Kei U., Baum, Carl R., (November 2019). Acute Cannabis Toxicity. Pediatric Emergency Care,35 (11), 799-804.

41. Breijyeh, Z., Jubeh, B., Bufo, S. A., Karaman, R., & Scrano, L. (2021). Cannabis: a toxin-producing plant with potential therapeutic uses. Toxins, 13(2), 117.

42. Srinivasan, K. (2009). Black pepper (Piper nigrum) and its bioactive compound, piperine. In Molecular targets and therapeutic uses of spices: Modern uses for ancient medicine (pp. 25-64).

43. Shah, A. J., & Gilani, A. H. (2010). Bronchodilatory effect of Acorus calamus (Linn.) is mediated through multiple pathways. Journal of ethnopharmacology, 131(2), 471-477.

44. Renne MF and Hariri H (2021) Lipid Droplet-Organelle Contact Sites as Hubs for Fatty Acid Metabolism, Trafficking, and Metabolic Channeling. Front. Cell Dev. Biol. 9:726261.

45. Baspinar, B., & Güldaş, M. (2021). Traditional plain yogurt: a therapeutic food for metabolic syndrome?. Critical reviews in food science and nutrition, 61(18), 3129–3143.

46. Patil, R., Rooge, S., Damame, H., Haldavnekar, V., & Arvindekar, A. (2021). Role of curd and yogurt in establishment and progression of diabetes through protein glycation and induction of inflammation. Food Bioscience, 39, 100829.

47. Sandeep Binorkar., et al. "A Review on Mechanism, Therapeutic Uses and Pharmacological Activities of Cannabis sativa". Acta Scientific Medical Sciences 6.8 (2022): 10-16.

48. Tavhare, S. D., Acharya, R., Reddy, R. G., & Dhiman, K. S. (2019). Management of chronic pain with Jalaprakshalana (water-wash) Shodhita (processed) Bhanga (Cannabis sativa L.) in cancer patients with deprived quality of life: An open-label single arm clinical trial. Ayu, 40(1), 34–43.

49. Yu-Jie Liu, Wei Peng, Mei-Bian Hu, Min Xu & Chun-Jie Wu (2016). The pharmacology, toxicology and potential applications of arecoline: a review, Pharmaceutical Biology, 54:11, 2753-2760.

50. Buddhadev SG, Sharma PP (2014). Clinical study of tamraparna (Nicotiana tabacum Linn.) W.S.R. to Swasahara karma (Antiasthamatic effect). Ayurpharm Int J Ayur Alli Sci., 3(7), 203- 213.

51. Shailesh, D. V., & Vinayak, D. S. (2018). Review Of Concept Of Rasayana (Rejuvenation) And Its Application In Current Times. European Journal of Pharmaceutial and Medical Research, 5(3). 210-216

52. Pal, A., Kumar, M., Saharan, V., Bhushan, B., & CCS HAU, H. (2015). Anti-oxidant and free radical scavenging activity of ashwagandha (Withania somnifera L.) leaves. J. Glob. Biosci, 4(1), 1127-1137.

53. Deeksha Sharma, Preeti, Arpita Sharma, Riyanka Kumari (2022). Brief Concept of Rasayana. World Journal on Pharmaceutical and Medical Research, 8 (2). 213-219.

54. Chaudhary, P., Lamba, N., & Mehra, B. L. (2017). Vrishya And Vajikarana-Exploring Ancient Science Of Aphrodisiacs. Journal of Research and Education in Indian Medicine, 23(1), 43-43.

55. Prashant Rajaram Shirke, & Jadhav Pradeep Uttam. (2022). Conceptual study on Vajikaran in Ayurveda. Journal of Ayurveda and Integrated Medical Sciences, 7(1), 240 - 243.

56. Kulkarni, R., Girish, K. J., & Kumar, A. (2012). Nootropic herbs (Medhya Rasayana) in Ayurveda: An update. Pharmacognosy reviews, 6(12), 147–153.

57. Pooja Sambhaji Panchaware, Abhijeet Ganesh Pachpor, Ovi Nandkishor Shinde, Sanjivani Samadhan Shekokar (2023). The study of pharmacological and pharmacodynamic actions of Herbal Medhya Plants in Manas-Vikara's. World Journal of Biology Pharmacy and Health Sciences, 14(01), 108–121.

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Chapter No.: 10

Karmas of Dashemani Gana

Dr. Sowmyashree K.M.

Objectives of the Chapter

1. **To know karmas of Charakokta Dashemani Gana.**

Topics in the chapter:

1) **Charakokta Dashemani Karmas with their Rasa, Guna, Vipaka, Veerya, Doshakarma, botanical identity & pharmaco-therapeutic action of individual drugs.**

Introduction:

In Ayurvedic treatises, the medicinal plants have been categorised into 'Gana' or 'Varga'. This categorization was done based on their utility or pharmacological action; either as Ahara or Aushadha. The word Gana refers to a group of medicinal plants. In Charaka Samhita, Acharya has categorized drugs in different areas. In Sutra Sthana 4th chapter – Shadvirechanashatashriteeya Adhyaya, Charaka mentioned about 50 Maha Kashayas (medicated decoctions). They are named according to the actions they perform when administered. Sutra Sthana 2nd chapter and Vimana Sthana 8th chapter also describes about different groups of medicinal plants for which specific actions are mentioned. Mahakashayas are grouped based on the specific pharmacological actions. Each Gana or group of drugs possess similar properties. These groups are just an idea, wise physician can add or delete the number of drugs as per his Yukti. Though the 50 Ganas contain 500 drugs in total, many are mentioned in more than one Gana due to their multiple actions. After enumerating the 50 Mahakashayas, Charaka mentioned that, description of these 500 drugs is neither too exhaustive nor too brief. It will be beneficial for those physicians who have low intelligence to treat various diseases. For those who have high intellectual caliber need not confine themselves to this list but can add or delete the drugs as per the need that have similar action. They may exercise their own and find out other similar drugs and use in their practice.

10.1. Gana with their Rasa, Guna, Vipaka, Veerya, Doshakarma, Botanical Identity & Pharmaco-therapeutic Action:

Definition of each Gana, Botanical identity, their Rasa Panchaka and pharmaco-therapeutic actions are described below:

1. जीवनीय

जीवनं आयुः तस्मैहितंजीवनीयम् । जीवनीयशब्देनेहायुष्यत्वमभिप्रेतम्।

(Chakrapani Commentary on C.S.Su 4/8)

जीवनीयंप्राणानांसंधारकम्। (Indu commentary on A.S.Su 15/6 Indu)

The word Jeevana refers to life. Dravyas which help to sustain and maintain the life (Jeevana is Prana Dharana) or which promotes life is Jeevaneeya.

General properties of Jeevaneeya:

पृथिव्यपां गुणैर्युक्तं जीवनीयमिति स्थितिः । (Rasavaisheshika 4th Bhashya)

क्षीरं जीवनीयानाम् । (C.S.Su 25/40)

Jeevaneeya Dravyas are predominant in Prithvi and Ap Mahabhuta. The Dravyas have Madhura Rasa & Vipaka, Guru-Snigdha-Sheeta Guna. These properties of Jeevaneeya Dravyas attributes to nourish all the Dhatus and Ojas. Due to the Dhatwagni Paka, there will be depletion of Dhatus in the body continuously. To restabilize the Dhatus, the Jeevaneeya Dravyas are to be taken daily in the form of Ahara. As per Acharya Charaka, Ksheera is the best Jeevaneeya Ahara.

जीवकर्षभकौमेदामहामेदाकाकोलीक्षीरकाकोलीमुद्गपर्णीमाषपर्ण्योजीवन्तीमधुकमिति दशेमानि जीवनीयानि भवन्ति। (C.S.Su 4/9)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic Action
Jeevaka	*Microstylis wallichii* Linn. Orchidaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Balya, Brimhana Shukrala
Rishabhaka	*Microstylis muscifera* (Lindl.) Ridl. Orchidaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Balya, Brimhana, Shukrala

Meda	*Poligonatum verticillatum* Linn. Asparagaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Vrishya, Brimhana, Shukra vivardhana, Stanyakrit
Maha-meda	*Polygonatum cirrhifolium* (Wall.) Asparagaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Pitta-vatahara	Vrishya, Brimhana, Shukra vivardhana, Stanyakrit
Kakoli	*Roscoea purpurea* Smith Zingiberaceae	**Rasa:** Madhura **Guna:** Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Shukrala, Brimhana, Stanyakara, Jeevana, Vrishya
Kshira Kakoli	*Lilium polyphyllum* D. Don Liliaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Brimhana, Vrishya, Basti shodhini, Stanyakara
Mudga-parni	*Phaseolus trilobus* Ait. Fabaceae	**Rasa:** Madhura **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Madhura	Tridosha-hara	Shukrajanana, Shukravriddhikara
Masha-parni	*Teramnus labialis* Linn. Fabaceae	**Rasa:** Madhura-Tikta **Guna:** Laghu, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Shukrala, Vrishya, Asrajit, Sangrahi, Pushtivardhini
Jeevanti	*Leptadenia reticulata* W & A Apocynaceae	**Rasa:** Madhura **Guna:** Laghu, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Tridosha-hara	Grahi, Chakshushya, Balya, Brimhana
Mad-huka/ Yashti-madhu	Glyccyrrhiza glabra Linn. Fabaceae	**Rasa:** Madhura **Guna:** Guru, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Medhya rasayana, Chakshushya, Shukrala, Keshya , Swarya

2. बृंहणीय

बृहत्वं यच्छरीरस्य जनयेत्तच्च बृंहणम् । (C.S.Su 22/10)

बृंहणीयो देहे बृंहणाय हितम् । (Gangadhara Commentary on Ca.S.Su 4/8)

मांसं बृंहणीयानाम् । (C.S.Su 25/40)

The Dravya which nourishes the Dhatus and increases the bulkiness of the body is Brimhana. It particularly increases the Mamsa Dhatu. Mamsa is the best Brimhana Dravya mentioned by Charaka as the best Dravya (Agrya).

General properties of Brimhaneeya:

बृंहणं पृथ्व्यम्बुभूयिष्ठम् । (S.S.Su 41/6)

Brimhana Dravyas are predominated with Prithvi and Ap Mahabhuta. Hence, Brimhana Dravyas mainly nourish Mamsa Dhatu. Medo Dhatu Vardhana is not Brimhana since Medovriddhi alone is a Vikriti (pathological state).

गुरु शीतं मृदु स्निग्धं बहलं स्थूलपिच्छिलम् । प्रायो मन्दं स्थिरं श्लक्ष्णं द्रव्यं बृंहणमुच्यते ॥ (C.S.Su 22/13)

These Dravyas have Guru (heavy), Sheeta (cold), Snigdha (unctuous), Mridu (soft), Bahala (thick), Sthoola (gross), Picchila (slimy), Manda (sluggish), Sthira (stable) and Shlakshna (smooth) Gunas.

क्षीणा: क्षता: कृशा वृद्धा दुर्बला नित्यमध्वगा: । स्त्रीमद्यनित्या ग्रीष्मे च बृंहणीया नरा: स्मृता: ॥ (C.S.Su 22/26)

Brimhana Chikitsa is indicated in Ksheena (debilitated), Kshata (injured person), Krisha (emaciated), Vriddha (old), Durbala (weak), Nityam Adhwaga (who walks a long distance), one who indulge in Stree (excessive sexual acts), Madya (who takes excess alcohol daily), and during Greeshma Ritu.

क्षीरिणीराजक्षवकाश्वगन्धाकाकोलीक्षीरकाकोलीवाट्यायनीभद्रौदनीभारद्वाजीपयस्यर्ष्यगन्धा इति दशेमानि बृंहणीयानि भवन्ति। (C.S.Su 4/9)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic Action
Ksheer-ini	*Mimusops hexandra* Roxb. Sapotaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Tridosha-hara	Hridya, Balya, Brimhana, Rochana
Rajak-shava ka/Dug-dhika	*Euphorbia hirta* Linn. Euphorbiaceae	**Rasa:** Katu-Tikta **Guna:** Guru-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kaha-pittahara	Vrishya, Shukrala

Ashwa-gandha	*Withania somnifera* Dunal. Solanaceae	**Rasa:** Tikta-Katu-Madhura **Guna:** Laghu-Snigha **Veerya:** Ushna **Vipaka:** Madhura	Vata-kaphahara	Rasayana, Vajikarana, Balya
Kakoli	*Roscoea purpurea* Smith Zingiberaceae	**Rasa:** Madhura **Guna:** Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Shukrala, Brimhana, Stanyakara, Jeevana, Vrishya
Kshira Kakoli	*Lilium polyphyllum* D. Don Liliaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Brimhana, Vrishya, Basti shodhini, Stanyakara
Vatyayani/ Shweta Bala	*Sida cordifolia* Linn. Malvaceae	**Rasa:** Madhura **Guna:** Laghu-Snigdha-Picchila **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Grahi, Balya
Bhadroudani/ Peeta Bala	Sida veronicaefolia Linn. Malvaceae	**Rasa:** Madhura **Guna:** Laghu-Snigdha-Picchila **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Grahi, Balya
Bharadwaji/ Vana karpasa	*Thespecia lampas* Dalz. & Gibs. Malvaceae	**Rasa:** Katu-Kashaya **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-pittahara	Mutrala, (Mula) Stanyakara, Vrishya (Beeja)
Payasya/ Vidarikanda	*Peuraria tuberosa* DC. Fabaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Brimhana, Stanyavardhaka, Shukrala, Jeevani, Rasayana

Rishya-gandha	*Argeria speciosa* Sweet. Convolvulaceae	**Rasa:** Katu-Tikta-Kashaya **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Kapha-vatahara	Rasayana, Vrishya, Shukravardhaka

3. लेखनीय

The description of Lekhana Karma is discussed in the 9th chapter.

मुस्तकुष्ठहरिद्रादारुहरिद्रावचातिविषाकटुरोहिणीचित्रकचिरबिल्वहैमवत्य इति दशेमानि लेखनीयानि भवन्ति । (C.S.Su 4/9)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic Action
Musta	*Cyperus rotundus* Linn. Cyperaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Pachana, Grahi, Krimighna
Kushta	*Saussurea lappa* C.B Clarke Asteraceae	**Rasa:** Tikta-Katu-Madhura **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Raktashodhaka, Varnya, Shukrala
Haridra	*Curcuma longa* Linn. Zingiberaceae	**Rasa:** Tikta-Katu **Guna:** Ruksha-Laghu **Veerya:** Ushna **Vipaka:** Katu	Kapha-pittahara	Krimighna, Kushtaghna, Varnya, Vishaghna
Daruharidra	Berberis aristata D. C Berberidaceae	**Rasa:** Tikta-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-pittahara	Arshoghna, Kandughna, Lekhana

Vacha	*Acorus calamus* Linn. Araceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Medhya, Pachana, Deepana, Kantya, Vibandhahara, Shakrit-mutra vishodhini
Ativisha	*Aconitum heterophyllum* Wall. Ranunculaceae	**Rasa:** Tikta-Katu **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Tridoshahara	Lekhaneeya, Shirovirechana, Grahi
Katurohini	*Picrorhiza kurroa* Royle ex Benth. Scrophulariaceae	**Rasa:** Tikta **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Pitta-kaphahara	Hridya, Deepana, Bhedana
Chitraka	*Plumbago zeylanica* Linn. Plumbaginaceae	**Rasa:** Katu **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Shothahara, Deepana, Pachana
Chirabilva/ Karanja	*Pongamia pinnata* Linn. Fabaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Laghu, Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Kushtaghna, Krimighna, Arsho rogahara
Haimavati/ Shweta vacha	Iris versicolor/germanica Iridaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Lekhana, Deepana, Pachana

4. भेदनीय

The description of Bhedana Karma is discussed in the 9th chapter.

सुवहार्कोरुबुकाग्निमुखीचित्राचित्रकचिरविल्वशङ्खिनीशकुलादनीस्वर्णक्षीरिण्य इति दशेमानि भेदनीयानि भवन्ति । (C.S.Su 4/9)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Suvaha/ Trivrit	*Operculina turpethum* R. B Covolvulaceae	**Rasa:** Tikta-Katu **Guna:** Ruksha-Teekshna-Laghu **Veerya:** Ushna **Vipaka:** Katu	Kapha-pittahara	Sukha virechaka,
Arka	*Calotropis gigantea* R. Br ex Ait. Asclepiadaceae	**Rasa:** Tikta **Guna:** Laghu **Veerya:** Ushna **Vipaka:** Katu	Kaphahara	Kushtaghna, Krimighna, Rechana, Deepana, Pachana
Urubuka/ Eranda	*Ricinus communis* Linn. Euphorbiaceae	**Rasa:** Madhura-Katu-Kashaya **Guna:** Snigdha-Tee- kshna-Ruksha **Veerya:** Ushna **Vipaka:** Madhura	Vata-kaphahara	Vrishya (root), Deepana, Vaya sthapana, Rechana (seed)
Agnimukhi/ Langali	*Gloriosa superba* Linn. Liliaceae	**Rasa:** Katu-Kashaya-Tikta **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kaphahara	Kushtagha, Krimighna, Garbhapatini
Chitra/ Danti	*Baliospermum montanum* Muell-Arg. Euphorbiaceae	**Rasa:** Katu **Guna:** Teekshna-Guru **Veerya:** Ushna **Vipaka:** Katu **Prabhava:** Virechaka	Pitta-kaphahara	Virechaka, Kandughna, Kushtaghna

Chitraka	*Plumbago zeylanica* Linn. Plumbaginaceae	**Rasa:** Katu **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Deepana, Pachana, Arshoghna, Lekhana, Bhedana, Shula prashamana
Chirabilva/ Karanja	*Pongamia pinnata* Linn. Fabaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Laghu, Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Kushtaghna, Krimighna, Arsho rogahara
Shankhini/ Yavatikta	*Euphorbia dracanculoides* Lam. Euphorbiaceae	**Rasa:** Katu-Tikta-Amla **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Katu	Tridoshahara	Deepana, Kushtaghna, Rechana
Shakuladani/ Katurohini	*Picrorhiza kurroa* Royle ex Benth. Scrophulariaceae	**Rasa:** Tikta **Guna:** Ruksha-Laghu **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Bhedana, Lekhana, Deepana
Swarnakshirini	*Argemone Mexicana* Linn. Papaveraceae	**Rasa:** Tikta-Katu **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Rechana, Bhedana

5. सन्धानीय

सन्धानाय भग्नसंयोजनाय हितं सन्धानीयम् । (Gangadhara Commentary on C.S.Su 4/8)

सन्धानकं शरीरेऽन्त: संहतिकरं भावानाम् । (Indu Commentary on A.S.Su. 15/6)

सन्धानीयं भग्नसन्धानकारकं, धातुसन्धानकारम् । (Dalhana Commentary on S.S.Su 38/47)

व्रणं कषाय: सन्धत्ते ....। (S.S.Su 14/40)

The substances useful to unite the fractured bones, torn Dhatus are called Sandhaneeya. It also heals the injured blood vessels, wound, torn Snayus, Mamsa etc. It also helps for the blood clotting (Rakta sandhana). Kashaya Rasa helps for Vrana Sandhana (wound healing).

General properties of Sandhaneeya Gana:

These Dravyas are predominant with Prithvi and Vayu Mahabhuta. These Dravyas attribute Guru, Sheeta, Madhura Rasa and Madhura Vipaka. They exhibit Balya (strengthening), Rasayana (Nourishing), Vedanasthapana (pain relieving), Rakta stambhana (arrests bleeding) etc properties, which helps for the healing. Drugs having Kashaya/Tikta/Katu Rasa, Sheeta Veerya helps for the Sandhana Karma. Kashaya-Tikta Rasa, Sheeta Veerya helps for vasoconstriction (stops bleeding); purifies the blood and helps for the healing process.

मधुकमधुपर्णीपृश्निपर्ण्यम्बष्ठकीसमङ्गामोचरसधातकीलोध्रप्रियङ्गुकट्फलानीति दशेमानि सन्धानीयानि भवन्ति । (C.S.Su 4/9)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Madhuaka/ Yashti madhu	*Glycyrrhiza glabra* Linn. Fabaceae	**Rasa:** Madhura **Guna:** Guru, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Medhya rasayana, Chakshushya, Shukrala, Keshya, Swarya
Madhuparni/ Guduchi	*Tinospora cordifolia* Miers. Menispemaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Laghu-Guru-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Deepana, Rasayana, Jwaraghna
Prishniparni	*Uraria picta* Devs. Fabaceae	**Rasa:** Madhura-Tikta **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Vrishya, Sangrahika, Deepana
Ambashtaki/ Patha	*Cissampelos pareira* Linn. Menispemaceae	**Rasa:** Katu **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Jwarahara, Stanya shodhana

Samanga/Manjishta	*Rubia cordifolia* Linn. Rubiaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Guru-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Vata-pittahara	Varnya, Vishaghna, Jwarahara
Mocharasa	*Salmalia malabarica* Schott & Endl. Bombaceae	**Rasa:** Kashaya **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Pitta-vatahara	Grahi, Vrishya,
Dhataki	*Woodfordia fruticosa* Kurz. Lythraceae	**Rasa:** Katu-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Madakari, Garbhasthapani, Atisarahara
Lodhra	*Symplocos racemosa Roxb.* Symplocaceae	**Rasa:** Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Grahi, Shonita sthapana, Purisha sangrahaneeya
Priyangu	*Callicarpa macrophylla* Vahl. Verbenaceae	**Rasa:** Tikta-Madhura-Kashaya **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Katu	Vata-pittahara	Vishahara, Grahi, Mutra virajaneeya
Katphala	*Myrica esculenta* Buch. - Ham. Myricaceae	**Rasa:**Kashaya-Tikta-Katu **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Vedana sthapana, Sandhaneeya

6. दीपनीय

The description of Deepana Karma is discussed in the 9th chapter.

पिप्पलीपिप्पलीमूलचव्यचित्रकशृङ्गवेराम्लवेतसमरिचाजमोदाभल्लातकास्थिहिङ्गुनिर्यासा इति दशेमानि दीपनीयानि भवन्ति । (C.S.Su 4/9)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Pippali	*Piper longum* Linn. Piperaceae	**Rasa:** Katu **Guna:** Snigdha-Laghu-Teekshna **Veerya:** Ushna (Dry), Sheeta (Fresh) **Vipaka:** Madhura	Vata-kaphahara	Deepana, Shoola prashamana, Vrishya, Rasayana
Pippali mula	Roots of *Piper longum* Linn. Piperaceae	**Rasa:** Katu **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Madhura	Kapha-vatahara	Deepana, Pachana, Shoola prashamana
Chavya	*Piper chaba* Hunter. Piperaceae	**Rasa:** Katu **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Deepana, Pachana
Chitraka	*Plumbago zeylanica* Linn. Plumbaginaceae	**Rasa:** Katu **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Deepana, Pachana, Arshoghna, Lekhana, Bhedana, Shula prashamana
Shringavera/Shunti	*Zingiber officinalis* Rosc. Zingiberaceae	**Rasa:** Katu **Guna:** Guru-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Madhura	Vata-kaphahara	Deepana, Bhedana, Shoola prshamana
Amlavetasa	*Garcinia pedunculata* Roxb. Clusiaceae	**Rasa:** Amla **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Amla	Kapha-vatahara	Deepana, Bhedana, Hridya

Mari-cha	*Piper nigrum* Linn. Piperaceae	**Rasa:** Katu **Guna:** Laghu-Ruksha-Teekshna, Guru (Ardra) **Veerya:** Ushna **Vipaka:** Katu; Madhura (Ardra)	Kapha-vatahara Pittakara (Shushka)	Deepana, Shoo-la prashamana, Krimighna, Shirovirechana,
Ajamo-da	*Apium graveolens* Linn. Apiaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Deepana, Shula prashamana
Bhalla-takas-thi	*Semecarpus anacardium* Linn. f. Anacardaceae	**Rasa:** Kashaya-Katu-Tikta **Guna:** Laghu-Snigdha-Teekshna **Veerya:** Ushna **Vipaka:** Madhura	Kapha-vatahara	Bhedana, Deep-ana, Kushtaghna
Hingu \nirya-sa/ Hingu	*Resin of Ferula narthex* Boiss. Apiaceae	**Rasa:** Katu **Guna:** Laghu-Snigdha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Pachana, Bhedana, Chedana, Artava janana, Ruchya, Anulomana

7. वल्य

वलाय हितं वल्यम् । (Gangadhara Commentary on C.S.Su 4/8)

ओज: वलपुष्टिकरं मतम् । (S.S.Pu. 5/36)

The Dravya which enhances Bala or strength is Balya. As the Bala and Ojus are used as synonyms, Balya Dravyas increase the Ojus as well. They do the Dhatu vardhana (nourishes all the Dhatus).

General properties of Balya Gana:

Most of the drugs of this Gana exhibit Tikta-Madhura Rasa, Sheeta veerya, Madhura Vipaka properties; which nourishes the Dhatus and Ojas providing strength to the body. They rejuvenate the whole body and increase the muscle bulk.

ऐन्द्री ऋषभ्यतिरसर्ष्यप्रोक्ताश्वगन्धास्थिरारोहिणीवलातिवला इति दशेमानि वल्यानि भवन्ति । (C.S.Su 4/10)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Aindri/ Brahmi	*Bacopa monnieri* .Pennel. Scrophulariaceae	**Rasa:** Tikta-Kashaya **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Medhya, Ras-ayana, Swarya
Rish-abhi/ Kapik-acchu	*Mucuna pruriens* (Linn.) DC. Fabaceae	**Rasa:** Tikta **Guna:** Guru **Veerya:** Ushna **Vipaka:** Madhura	Vatahara	Balya, Vrishya, Brimhana
Atirasa/ Shata-vari	*Asparagus racemosus* Willd. Liliaceae	**Rasa:** Tikta-Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Rasayana, Shukrala, Stanyakari, Balya
Rishya-prokta/ Masha-parni	*Teramnus labialis* Spreng. Fabaceae Fabaceae	**Rasa:** Madhura-Tikta **Guna:** Laghu, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Shukrala, Vrishya, Asrajit, Sangrahi, Pushtivardhini
Paya-sya/ Kshira vidari	*Ipomea digitata* Linn. Convolvulaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Brimhana, Stanyavardhaka, Shukrala, Jeevani, Rasayana
Ashwa-gandha	*Withania somnifera* Dunal. Solanaceae	**Rasa:** Tikta-Kashaya **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Balya, Rasayana, Shukrala

Sthira/ Shalapa-rni	*Desmodium gangeticum* DC. Fabaceae	**Rasa:** Madhura-Tikta **Guna:** Guru-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Balya, Vrishya, Brimhana, Rasayana
Rohini	*Picrorhiza kurroa* Royle ex Benth. Scrophulariaceae	**Rasa:** Tikta **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Bhedana
Bala	*Sida cordifolia* Linn. Malvaceae	**Rasa:** Madhura **Guna:** Laghu-Snigdha-Picchila **Veerya:** Sheeta **Vipaka:** Madhura	Vatahara	Balya, Brimhana, Vrishya, Prajasthapana
Atibala	*Abutilon indicum* (L.) Sweet Malvaceae	**Rasa:** Madhura **Guna:** Laghu-Snigdha-Picchila **Veerya:** Sheeta **Vipaka:** Madhura	Vatahara	Balya, Brimhana, Vrishya, Prajasthapana

8. वर्ण्य

वर्णाय हितं वर्ण्यम् । (Gangadhara Commentary on C.S.Su 4/8)

वर्चसे प्रभायै वर्णाय हितं वर्ण्यम् । (Rasavaisheshika Sutra)

The Dravyas which are helpful to improve the complexion is called Varnya. The word 'Prabha'means lusture of the body. Drugs which promote the Prabha is called Varnya Dravya.

General properties of Varnya Gana:

Varna (complexion) is the normal function of Pitta and Rakta. Bhrajaka Pitta is responsible for the complexion. Madhura rasa Dravyas are having Varnakara property (gives good complexion). Kashaya rasa is responsible for the Twak prasadana (cleanses the skin) and thereby enhances the complexion. Madhura rasa, Madhura Vipaka, Sheeta Veerya Dravyas are responsible for Varnya action. Some Ushna Veerya Dravyas like Manjishta, Haridra etc also stimulates the skin, Rasa Dhatu and Rakta Dhatu which help to enhance the complexion.

चन्दनतुङ्गपद्मकोशीरमधुकमञ्जिष्ठासारिवापयस्यासितालता इति दशेमानि वर्ण्यानि भवन्ति । (C.S.Su 4/10)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Chandana	*Santalum album* Linn. Santalaceae	**Rasa:** Tikta-Madhura **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Varnya, Vishahara, Dahaprashamana
Tunga/ Punnaga	*Callophyllum inophyllum* Linn. Clusiaceae	**Rasa:** Madhura-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Bhutahara, Varnya
Padmaka	*Prunus cerasoides* D.Don. Rosaceae	**Rasa:** Kashaya-Tikta **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Vedanasthapana, Garbha sthapana
Usheera	*Vetiveria ziznoides* Nash. Poaceae	**Rasa:** Tikta **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Daha prashamana, Shukra shodhana, Stanya janana, Varnya
Madhuka/ Yashtimadhu	*Glyccyrrhiza glabra* Linn. Fabaceae	**Rasa:** Madhura **Guna:** Guru, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Medhya rasayana, Chakshushya, Shukrala, Keshya, Swarya
Manjishta	*Rubia cordifolia* Linn. Rubiaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Guru-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Vata-pittahara	Varnya, Vishaghna, Jwarahara
Sariva	*Hemidesmus indicus* R. B Apocynaceae	**Rasa:** Madhura-Tikta **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara	Amavishahara, Jwarahara, Daha prashamana, Stanya shodhana, Varnya, Kantya

Payasya/ Kshiravidari	*Ipomea digitata* Baker & Rendle Convolvulaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Brimhana, Stanyavardhaka, Shukrala, Jeevani, Rasayana
Sita/ Shweta Durva	White variety of *Cynodon dactylon* Pers. Poaceae	**Rasa:** Tikta-Madhura-Kashaya **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Varnya, Prajasthapana, Raktastambhana
Lata/ Shyama Durva	Black variety of *Cynodon dactylon* Pers. Poaceae	**Rasa:** Tikta-Madhura-Kashaya **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Varnya, Prajasthapana, Raktastambhana

9. कण्ठ्य

कण्ठस्य स्वराय हितं कण्ठ्यम् । (Gangadhara Commentary on Ca.S.Su 4/8)

कण्ठाय हितं कण्ठ्यम् । (Yogindranath Sen Commentary on Ca.S.Su 4/8)

That which soothes the throat and improves the voice is called Kantya Dravya.

General properties of Kantya:

Katu-Tikta Rasa and Ushna Veerya Dravyas act as Kantya by their Kaphaghna, Kledaghna and Shothaghna actions when it vitiated by Kapha. If it vitiated by Vata, Madhura rasa dravyas acts as Kantya. In Pittaja Kantha Dushti, Madhura Rasa and Sheeta Veerya Dravyas are used.

सारिवेक्षुमूलमधुकपिप्पलीद्राक्षाविदारीकैडर्यहंसपादीबृहतीकण्टकारिका इति दशेमानि कण्ठ्यानि भवन्ति । (C.S.Su 4/10)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Sariva	*Hemidesmus indicus* R. B Apocynaceae	Rasa: Madhura-Tikta Guna: Guru-Snigdha Veerya: Sheeta Vipaka: Madhura	Tridoshahara	Amavishahara, Jwarahara, Daha prashamana, Stanya shodhana, Varnya, Kantya
Ikshumula	Root of *Saccharum officinarum* Linn. Liliaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Balya, Vrishya, Mutrala
Madhuka/ Yashtimadhu	*Glyccyrrhiza glabra* Linn. Fabaceae	**Rasa:** Madhura **Guna:** Guru, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Medhya rasayana, Chakshushya, Shukrala, Keshya, Swarya
Pippali	*Piper longum* Linn. Piperaceae	**Rasa:** Katu **Guna:** Snigdha-Laghu-Teekshna **Veerya:** Ushna (Dry), Sheeta (Fresh) **Vipaka:** Madhura	Vata-kaphahara	Deepana, Shoola prashamana, Vrishya, Rasayana
Draksha	*Vitis vinifera* Linn. Vitaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha-Mridu **Veerya:** Sheeta **Vipaka:** Madhura **Prabhava:** Virechaka	Kapha-pittahara	Brimhana, Swarya, Vrishya, Mutrala
Vidari	*Peuraria tuberosa* (Roxb. Ex Willd. DC.) Fabaceae	**Rasa:** Madhura **Guna:** Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Pitta-vatahara	Brimhana, Shukrala, Stanyakara, Vrishya, Balya, Rasayana
Kaitarya/ Katphala	*Myrica esculenta* Buch. - Ham. Myricaceae	**Rasa:** Kashaya-Tikta-Katu **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Vedana sthapana, Shukra shodhana, Sandhaneeya
Hamsapadi	*Adiantum lunulatum* Burm. f. Polypodiaceae	**Rasa:** Kashaya **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Kantya, Vranaropana

Brihati	*Solanum indicum* Linn. Solanaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Pachana, Shothahara, Grahi
Kanta-karika	*Solanum xanthocarpum* Schrad. & Wendl. Solanaceae	**Rasa:** Tikta-Katu **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Sara, Deepana, Pachana

10. हृद्य

हृदयाय मनसे हितं हृद्यम् । (Gangadhara Commentary on C.S.Su 4/8)

The Dravya which is beneficial to Hridaya or Manas is called Hridya.

अम्लं हृद्यानाम् । (C.S.Su 25/40)

General properties of Hridya Gana:

Some of the Hridya dravyas have Amla Rasa. Amla Rasa acts on Rasa Dhatwagni and stimulates formation of Rakta Dhatu. This helps to nourish the Hridaya as well as Manas. These drugs nourish as well as stimulates the heart to function normally.

आम्राम्रातकलकुचकरमर्दवृक्षाम्लाम्लवेतसकुवलबदरदाडिममातुलुङ्गानीति इति दशेमानि हृद्यानि भवन्ति। (C.S.Su 4/10)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Amra	*Mangifera indica* Linn. Anacardiaceae	**Rasa:** Madhura-Kashaya-Amla **Guna:** Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Mutra sangrahaneeya, Hridya, Grahi, Vrishya
Amra-taka	*Spondias pinnata* Kurz. Anacardiaceae	**Rasa:** Amla-Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Deepana, Rochana, Brimhana, Balya

Laku-cha	*Artocarpus lakoocha* Roxb. Moraceae	**Rasa:** Madhura-Amla **Guna:** Guru **Veerya:** Ushna **Vipaka:** Madhura	Vata-pittahara	Ruchya, Vrishya
Kara-marda	*Carissa carandus* Linn. Apocynaceae	**Rasa:** Amla-Madhura **Guna:** Guru **Veerya:** Ushna **Vipaka:** Amla	Vatahara	Hridya, Ruchikara
Vrik-shamla	*Garcinia indica* (Thouaras) Choisy Clusiaceae	**Rasa:** Madhura-Amla **Guna:** Guru-Ruksha **Veerya:** Ushna **Vipaka:** Amla	Vatahara	Grahi, Deepana, Hridya
Amla-vetasa	*Garcinia pedunculata* Roxb. Ex Buch. – Ham. Clusiaceae	**Rasa:** Amla **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Madhura	Kapha-vatahara	Deepana, Bhedana, Hridya
Kuvala	*Ziziphus sativa* Gaertn. Rhamnaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Bhedana, Hridya, Brimhana
Badara	*Ziziphus jujuba* Lam. Rhamnaceae	**Rasa:** Madhura-Amla **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vatahara	Bhedana, Hridya, Grahi, Brimhana
Dadi-ma	*Punica granatum* Linn. Punicaceae	**Rasa:** Madhura-Amla-Kashaya **Guna:** Snigdha-Laghu **Veerya:** Ushna **Vipaka:** Madhura	Tridosha-hara	Tarpana, Hridya, Shukrala, Balya
Matu-lunga	*Citrus medica* Linn. Rutaceae	**Rasa:** Madhura-Amla **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Amla	Vata-kapha-hara	Deepana, Hridya, Grahi

11. तृप्तिघ्न

तृप्तिः श्लेष्मविकारो, येन तृप्तिमिवात्मानं मन्यते, तदघ्नं तृप्तिघ्नम् ।

(Gangadhara Commentary on C.S.Su 4/8)

तृप्तिं हन्तीति तृप्तिघ्नम् । (Ca.S.Su 4/8)

The Dravyas which are used to correct 'Tripti' are called as 'Triptighna'.

The word 'Tripti' refers to satisfaction. It is one of the Kaphaja Nanatmaja Vikara. Due to the vitiated Kapha, person feels as if his stomach is filled. So, it is the sense of satisfaction only, though the stomach is empty. Hence the person will not be feeling hungry or no desire to take food. Guru, Snigdha, Sheeta, Manda etc Guna of Kapha is responsible for this action in the body.

General properties of Triptighna Gana:

Most of the drugs of this Gana are having Ushna Veerya, Katu-Tikta Rasa, Katu Vipaka. Hence the Dravyas are predominant with Agni and Vayu Mahabhuta. These drugs single or in combination useful in digestive system related problems. Being Katu-Tikta Rasa and Ushna Veerya Dravyas, helpful in Saama stage of diseases. They do Ama Pachana, by which the transformation of Rasa Dhatu takes place and thereby kindles the Jatharagni. There by improves the digestion and metabolic state of the body. As these are Ushna-Teekshna Dravyas, precaution should be taken while prescribing.

नागरचव्यचित्रकविडङ्गमूर्वागुडूचीवचामुस्तपिप्पलीपटोलानीति दशेमानि तृप्तिघ्नानि भवन्ति । (C.S.Su 4/11)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Nagara	*Zingiber officinale* Rosc. Zingiberacea	**Rasa:** Katu **Guna:** Guru-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Madhura	Vata-kaphahara	Deepana, Bhedana, Shoola prshamana
Chavya	*Piper chaba* Hunter. Piperaceae	**Rasa:** Katu **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Deepana, Pachana

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Chitraka	*Plumbago zeylanica* Linn. Plumbaginaceae	**Rasa:** Katu **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Deepana, Pachana, Arshoghna, Lekhana, Bhedana, Shula prashamana
Vidanga	*Embelia ribes* Burm f. Myrsinaceae	**Rasa:** Katu-Kashaya **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Krimighna, Kushtaghna, Shirovirechana, Deepana
Murva	*Marsedenia tenacissima* (Roxb.) Moon Asclepiadaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Guru-Ruksha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Sara, Stanya shodhana
Guduchi	*Tinospora cordifolia* Miers. Menispermaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Laghu-Guru-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Deepana, Rasayana, Jwaraghna
Vacha	*Acorus calamus* Linn. Araceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Medhya, Pachana, Deepana, Kantya, Vibandhahara, Shakrit-mutra vishodhini
Musta	*Cyperus rotundus* Linn. Cyperaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Pachana, Grahi, Krimighna

Pippali	*Piper longum* Linn. Piperaceae	**Rasa:** Katu **Guna:** Snigdha-Laghu-Teekshna **Veerya:** Ushna (Dry), Sheeta (Fresh) **Vipaka:** Madhura	Vata-kaphahara	Deepana, Shoola prashamana, Vrishya, Rasayana
Patola	*Trichosanthes dioica* Linn. Cucurbitaceae	**Rasa:** Tikta-Katu **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Tridosha-hara	Deepana, Pachana, Rechana

12. अर्शोघ्न

अर्शांसि हन्तीति अर्शोघ्नम् । (Chakrapani Commentary on Ca.S.Su 4/8)

The drugs used to cure Arshas (Haemorrhoids) are called Arshogna Dravyas.

General properties of Arshoghna Gana:

Most of the drugs of this Gana are having Ushna Veerya, Katu, Tikta, Kashaya Rasa, Katu Vipaka. Hence the Dravyas are predominant with Agni and Vayu Mahabhuta. These drugs are helpful to kindle the Jatharagni (Agni Deepana). They do the Sroto shodhana as well. These drugs are helpful in improving the digestion and thereby helps for the easy evacuation of the bowel. Tikta-Kashaya Rasa, Sheeta Veerya Dravyas helps to control the bleeding after removing the vitiated Doshas in bleeding piles (Sravi Arshas).

कुटजविल्वचित्रकनागरातिविषाभयाधन्वयासकदारुहरिद्रावचाचव्यानीति दशेमानि अर्शोघ्नानि भवन्ति । (C.S.Su 4/11)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Kutaja	*Holarrhena antidysenterica* Wall. Apocynaceae	**Rasa:** Katu-Tikta-Kashaya **Guna:** Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-hara	Deepana, Arshoghna, Kandughna, Amahara

Bilva	*Aegle marmelos* Corr. Rutaceae	**Rasa:** Kashaya-Tikta **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Shothahara, Arshoghna, Pachana, Deepana Pakva phala – Vishtambhi, Vidahi
Chitraka	*Plumbago zeylanica* Linn. Plumbaginaceae	**Rasa:** Katu **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Deepana, Pachana, Arshoghna, Lekhana, Bhedana, Shula prashamana
Nagara	*Zingiber officinale* Rosc. Zingiberacea	**Rasa:** Katu **Guna:** Guru-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Madhura	Vata-kaphahara	Deepana, Bhedana, Shoola prshamana
Ativisha	*Aconitum heterophyllum* Wall. Ranunculaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-pittahara	Deepana, Pachana, Grahi, Vishaghna
Abhaya/ Haritaki	*Terminalia chebula* Linn. Combretaceae	**Rasa:** Lavana varjita pancha rasa **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Deepana, Rasayana, Anulomana, Chakshushya
Dhanvayavasaka	*Fagonia cretica* Linn. Zygophyllaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Jwarahara
Daruharidra	*Berberis aristata* DC Berberidaceae	**Rasa:** Katu-Tikta **Guna:** Ruksha-Laghu **Veerya:** Ushna **Vipaka:** Katu	Kapha-pittahara	Varnya, Bhedana, Rasayana

Vacha	*Acorus calamus* Linn. Araceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Medhya, Pachana, Deepana, Kantya, Vibandhahara, Shakritmutra vishodhini
Chavya	*Piper chaba* Hunter. Piperaceae	**Rasa:** Katu **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Deepana, Pachana

13. कुष्ठघ्न

कुष्ठं हन्तीति कुष्ठघ्नम् । (Chakrapani Commentary on Ca.S.Su 4/8)

Dravyas which are useful in treating the skin diseases are known as Kushtaghna.

General properties of Kushtaghna Gana:

Most of the Dravyas are having Tikta-Katu-Kashaya Rasa, Laghu-Teekshna Guna, Ushna Veerya and they undergo Katu vipaka. Hence, they pacify Kapha. By Sroto Shodhana and scraping action, they are helpful to cure the skin ailments.

खदिराभयामलकहरिद्रारुष्करसप्तपर्णारग्वधकरवीरविडङ्गजातीप्रवाला इति दशेमानि कुष्ठघ्नानि भवन्ति। (C.S.Su 4/11)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Khadira	*Acacia catechu* Willd. Fabaceae	**Rasa:** Tikta-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Kushtaghna, Pachana
Abhaya/ Haritaki	*Terminalia chebula* Linn. Combretaceae	**Rasa:** Lavana varjita pancha rasa **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Deepana, Rasayana, Anulomana, Chakshushya

Amalaki	*Emblica officinalis* Gaertn. Euphorbiaceae	**Rasa:** Pancha rasa except Lavana **Guna:** Guru-Ruksha **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara	Vrishya, Rasayana, Chakshushya, Vayasthapana, Kushtaghna
Haridra	*Curcuma longa* Linn. Zingiberaceae	**Rasa:** Katu-Tikta **Guna:** Ruksha-Laghu **Veerya:** Ushna **Vipaka:** Katu	Kapha-pittahara	Varnya, Lekhana, Vishaghna
Arushkara/ Bhallataka	*Semecarpus anacardium* Linn. f. Anacardaceae	**Rasa:** Kashaya-Katu-Tikta **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Kapha-vatahara	Bhedana, Deepana, Vrishya, Kushtaghna
Saptaparna	*Alstonia scholaris* R. Br. Apocynaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-vatahara	Deepana, Kushtaghna, Jwarahara
Aragwadha	*Cassia fistula* Linn. Fabaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Pitta-kaphahara	Sramsana, Kushtaghna, Kandughna
Karaveera	*Nerium indicum* Mill. Apocynaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Kushtaghna, Vrana shodhana, Vrana ropana
Vidanga	*Embelia ribes* Burm f. Myrsinaceae	**Rasa:** Katu-Kashaya **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Krimighna, Kushtaghna, Shiro virechana, Deepana
Jati - pravala	Tender shoots of *Jasminum officinale* Linn. Oleaceae	**Rasa:** Tikta-Kashaya **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Vatahara	Vrana shodhana, Vrana ropana, Kushtaghna

14. कण्डूघ्न

कण्डूं हन्तीति कण्डूघ्नम् । (Chakrapani Commentary on Ca.S.Su 4/8)

The drugs that are used to treat Kandu (itching) are known as Kandughna. These Dravyas pacifies the Kapha as well.

General properties of Kandughna Gana:

Kandu is a symptom caused by excess accumulation of Kapha & Pitta in the Srotas responsible for the increased Kleda (moisture) in the body. These drugs possess, Tikta-Katu or Tikta-Katu-Kashaya or Madhura Rasa, Laghu-Ruksha-Teekshna guna, Ushna/Sheeta Veerya and Katu Vipaka. These properties counteract the vitiated Kapha and Pitta.

चन्दननलदकृतमालनक्तमालनिम्बकुटजसर्षपमधुकदारुहरिद्रामुस्तानीति इति दशेमानि कण्डूघ्नानि भवन्ति । (C.S.Su 4/11)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Chandana	*Santalum album* Linn. Santalaceae	**Rasa:** Tikta-Madhura **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Daha prashamana, Varnya, Vishaghna
Nalada/ Jatamamsi	*Nardostachys jatamansi* DC. Valerianaceae	**Rasa:** Tikta-Kashaya-Madhura **Guna:** Ruksha-Laghu **Veerya:** Sheeta **Vipaka:** Katu	Tridoshahara	Medhya, Balya
Kritamala/ Aragwadha	*Cassia fistula* Linn. f. Fabaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Pitta-kaphahara	Sramsana, Kushtaghna, Kandughna
Naktamala/ Karanja	*Pongamia pinnata* Linn. Fabaceae	**Rasa:**Tikta-Katu-Kashaya **Guna:** Laghu, Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Kushtaghna, Krimighna, Arsho rogahara
Nimba	*Azadirachta indica* A. Juss. Meliaceae	**Rasa:** Tikta-Kashaya **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Katu	Pitta-kaphahara	Deepana, Grahi, Krimighna, Kushtaghna
Kutaja	*Holarrhena antidysenterica* Wall. Apocynaceae	**Rasa:** Katu-Tikta-Kashaya **Guna:** Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-hara	Deepana, Arshoghna, Kandughna, Amahara
Sarshapa	*Brassica compestris* Linn. var. sarson Prain Brassicaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Deepana, Kandughna, Kushtaghna
Madhuka/ Yashtimadhu	*Glyccyrrhiza glabra* Linn. Fabaceae	**Rasa:** Madhura **Guna:** Guru, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Medhya rasayana, Chakshushya, Shukrala, Keshya, Swarya
Daruharidra	*Berberis aristata* DC Berberidaceae	**Rasa:** Katu-Tikta **Guna:** Ruksha-Laghu **Veerya:** Ushna **Vipaka:** Katu	Kapha-pittahara	Varnya, Bhedana, Rasayana
Musta	*Cyperus rotundus* Linn. Cyperaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Pachana, Grahi, Krimighna

15. कृमिघ्न

कृमीन् हन्तीति कृमिघ्नम् । (Chakrapani Commentary on Ca.S.Su 4/8)

Word Krimi refers to worms. The Dravyas which are helpful to expel the krimi (both Bahya and Abhyantara) are called Krimighna Dravyas (Vermifuge).

General properties of Krimighna Gana:

These medicines are having Katu-Tikta Rasa, Ushna Veerya, Laghu-Teekshna Guna and Katu Vipaka. These Dravyas are helpful as Prakriti vighatana (breaks down the pathogenesis) of Krimi. These medicines help to improve the digestion and thereby helps in Samprapti Vighatana of Krimi.

अक्षीवमरिचगण्डीरकेबुकविडङ्गनिर्गुण्डीकिणिहीश्वदंष्ट्रावृषपर्णिकाखुपर्णिका इति दशेमानि कृमिघ्नानि भवन्ति । (C.S.Su 4/11)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharma-co-therapeutic action
Aksheeva/Shigru	*Moringa oleifera* Lam. Fabaceae	**Rasa:** Katu-Madhura **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Deepana, Krimighna, Shirovirechanopaga, Chakshushya
Maricha	*Piper nigrum* Linn. Piperaceae	**Rasa:** Katu **Guna:** Laghu-Ruksha-Teekshna, Guru (Ardra) **Veerya:** Ushna **Vipaka:** Katu; Madhura (Ardra)	Kapha-vatahara Pittakara (Shushka)	Deepana, Shoola prashamana, Krimighna, Shirovirechana,
Gandeera/Ramatha shakam	Stem of *Ferula narthex* Fabaceae	**Rasa:** Katu **Guna:** Teekshna-Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Deepana, Artava janana, Anulomana, Bhedana
Kebuka	*Costus speciosus* (Koen.ex Retz.) Costaceae	**Rasa:** Tikta **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Pachana, Krimighna
Vidanga	*Embelia ribes* Burm f. Myrsinaceae	**Rasa:** Katu-Kashaya **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Krimighna, Kushtaghna, Shiro virechana, Deepana

Nirgundi	*Vitex negundo* Linn. Verbenaceae	**Rasa:** Kashaya-Katu **Guna:** Laghu **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Krimighna, Vishaghna
Kinihi/Apamarga	*Achyranthes aspera* Linn. Amaranthaceae	**Rasa:** Tikta-Katu **Guna:** Teekshna **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-vatahara	Deepana, Pachana, Shirovirechanopaga, Krimighna
Shwadamshtra/Gokshura	*Tribulus terrestris* Linn. Zygophyllaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vatahara	Deepana, Vrishya, Vasti-shodhana
Vrishaparnika	*Evolvulus nummularis* (L) L. Convolvulaceae	**Rasa:** Kashaya-Katu-Tikta **Guna:** Snigdha-Picchila-Guru-Sara **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara	Medhya, Vrishya, Rasayana, Balya
Akhuparnika	*Ipomea reniformis* Chois. Convolvulaceae	**Rasa:** Kashaya-Katu-Tikta **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Katu	Kaphahara	Krimighna

16. विषघ्न

विषं हन्तीति विषघ्नम् । (Chakrapani Commentary on Ca.S.Su 4/8)

शिरीषो विषघ्नानाम् । (C.S.Su 25/40)

Dravyas which helps to destroy or pacify the effect of poison (anti-poisonous) are called as Vishaghna. Shireesha is the best Vishaghna Dravya according to Charaka.

General properties of Vishaghna Gana:

विषघ्नानि प्रभावात् । (Gangadhara Commentary on Ca.S.Su 4/8)

The drugs having Madhura-Tikta-Kashaya Rasa, Sheeta Veerya, Madhura Vipaka

helps to alleviate Pitta and there by Rakta. The Kashaya Rasa and Sheeta Veerya properties helps to arrest the spread of poison. Madhura Rasa and Vipaka are Ojaskara also. The qualities of Visha are opposite to Ojas, thereby nullifies the effect of Visha. Also, the anti-poisonous properties are due to Prabhava.

हरिद्रामञ्जिष्ठासुवहासूक्ष्मैलापालिन्दीचन्दनकतकशिरीषसिन्धुवारश्लेष्मातका इति दशेमानि विषघ्नानि भवन्ति । (C.S.Su 4/11)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Haridra	*Curcuma longa* Linn. Zingiberaceae	**Rasa:** Katu-Tikta **Guna:** Ruksha-Laghu **Veerya:** Ushna **Vipaka:** Katu	Kapha-pittahara	Varnya, Lekhana, Vishaghna
Manjishta	*Rubia cordifolia* Linn. Rubiaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Guru-Ruksha **Veerya:** Ushna **Vipaka:** Katu **Prabhava:**	Vata-pittahara	Varnya, Vishaghna, Jwarahara
Suvaha	*Pluchea lanceolata* Oliver & Hiern. Asteraceae	**Rasa:** Tikta **Guna:** Guru **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Ama pachana, Shothaghna, Vishaghna
Sukshmaila	*Elettaria cardamomum* Maton. Zingiberaceae	**Rasa:** Katu **Guna:** Ruksha-Laghu **Veerya:** Sheeta **Vipaka:** Katu **Prabhava:** Jeevana	Vata-kapha-hara	Deepana, Shwasahara
Palindi	*Ichnocarpus frutiscens* R. Br. Apocynaceae	**Rasa:** Madhura-Tikta **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara	Amavishahara, Jwarahara, Daha prashamana, Stanya shodhana, Varnya, Kantya
Chandana	*Santalum album* Linn. Santalaceae	**Rasa:** Tikta-Madhura **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Varnya, Vishahara, Dahaprashamana
Kataka	*Strychnos potatorum* Linn. f. Loganiaceae	**Rasa:** Madhura-Kashaya **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Katu	Vata-kapha-hara	Chakshushya, Vari prasadana
Shireesha	*Albizzia lebbeck* Benth. Fabaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Anushna **Vipaka:** Katu **Prabhava:** Vishaghna	Tridoshahara	Vishaghna, Vedana sthapana
Sindhuvaara/ Nirgundi	*Vitex negundo* Linn. Verbenaceae	**Rasa:** Kashaya-Katu **Guna:** Laghu **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Krimighna, Vishaghna
Shleshmataka	Cordia dichotoma Forst. F. Boraginaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Guru-Snigdha-Picchila **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Keshya, Vishaghna

17. स्तन्यजनन

स्तन्यं जनयतीति स्तन्य जननम् । (Chakrapani Commentary on Ca.S.Su 4/8)

The drugs which help to enhance the Stanya (Breast milk) production are known as Stanya Janana Dravya.

General properties of Stanyajanana Gana:

These drugs are helpful to stimulate the secretion of milk in the mother as well as to improve the quality of breast milk. As the Stanya is the Upadhatu of Rasa (essence of Rasa Dhatu), these drugs are helpful to enhance the formation of Rasa and thereby the Stanya. Most of the drugs possess Madhura/

Madhura-Kashaya Rasa, Laghu-Snigdha guna, Sheeta Veerya and Madhura Vipaka. These properties help to improve the quality of Rasadhatu or these will compensate the Stanyakshaya (decreased secretion of breast milk). The drugs provide strength (Balya), nourishment (Brimhana) to the lactating mother.

वीरणशालिषष्टिकेक्षुवालिकादर्भकुशकाशगुन्द्रेत्कटकत्तृणमूलानीति दशेमानि स्तन्यजननानि भवन्ति । (C.S.Su 4/12)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Veerana	*Vetiveria ziznoides* Nash. Poaceae	**Rasa:** Tikta **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Daha prashamana, Shukra shodhana, Stanya janana, Varnya
Shali	*Oryza sativa* Linn. Poaceae	**Rasa:** Madhura-Kashaya **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-kaphahara	Balya, Ruchya, Vrishya, Brimhana, Mutrala
Shashtika shali	A variety of *Oryza sativa* Linn. Poaceae	**Rasa:** Madhura **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara	Pathya, Ruchya, Deepana, Balada
Ikshuvalika	*Asteracantha longifolia* Nees. Acanthaceae	**Rasa:** Madhura-Amla-Tikta **Guna:** Picchila **Veerya:** Sheeta **Vipaka:** Madhura	Vatahara	Vrishya, Stanya janana
Darbha	*Desmostachya bipinnata* Staff. Poaceae	**Rasa:** Madhura-Kashaya **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara	Stanya janana, Mutra virechaneeya
Kusha	A variety of *Desmostachya bipinnata* Staff. Poaceae	**Rasa:** Madhura-Kashaya **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara	Stanya janana, Mutra virechaneeya
Kasha	*Saccharum spontaneum* Linn. Poaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Kapha-pittahara	Vrishya, Mutrala
Gundra	*Typha angustata* Bory & Chaub.	**Rasa:** Kashaya-Madhura **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Madhura	Pittahara	Stanya shodhana, Shukra shodhana, Vrishya, Chakshushya
Itkata	*Typha elephantina* Roxb. Typhaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Vrishya, Chakshushya
Katruna mula	Root of *Cymbopogon schoenanthus* (DC.) Stapf. Poaceae	**Rasa:** Madhura **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-kaphahara	Mukha shodhana, Deepana

17. स्तन्यशोधन

दोषदूषितं स्तन्यं शोधयतीति स्तन्यशोधनम् । (Chakrapani Commentary on C.S.Su 4/8)

The drugs which are used to cleanse or detoxify the breast milk; thereby enhances the quality of breast milk. These drugs are used to treat mother for her vitiated breast milk. Vitiated breast milk will result in ill health in baby constantly. Only healthy, pure breast milk will be helpful for the growth and development of the baby.

General properties of Stanyashodhana Gana:

Due to Katu-Tikta Rasa, Laghu-Ruksha-Teekshna Guna will help to remove the vitiated Doshas from the Stanya. As the Stanya is the Upadhatu of Rasa, Rasa Dushti is the main cause for the vitiation of breast milk. Above properties of

Stanyashodhana Mahakashaya helps to digest the untransformed Rasa Dhatu (Ama) and clears the Dosha.

पाठामहौषधसुरदारुमुस्तमूर्वागुडूचीवत्सकफलकिराततिक्तकटुरोहिणीसारिवा इति दशेमानि स्तन्यशोधनानि भवन्ति । (C.S.Su 4/12)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Patha	*Cissampelos pareira* Linn. Menispermaceae	**Rasa:** Katu **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Jwarahara, Stanya shodhana
Mahoushadha	*Zingiber officinale* Rosc. Zingiberaceae	**Rasa:** Katu **Guna:** Guru-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Madhura	Vata-kaphahara	Deepana, Bhedana, Shoola prashamana
Suradaru/ Devadaru	*Cedrus deodara* Loud. Pinaceae	**Rasa:** Tikta-Kashaya **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Deepana, Stanya shodhana
Musta	*Cyperus rotundus* Linn. Cyperaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Pachana, Grahi, Krimighna
Murva	*Marsedenia tenacissima* (Roxb.) Moon Asclepiadaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Guru-Ruksha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Sara, Stanya shodhana
Guduchi	*Tinospora cordifolia* Miers. Menispermaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Laghu-Guru-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Deepana, Rasayana, Jwaraghna

Vatsakaphala	Fruit of *Holarrhena antidysenterica* Wall. Apocynaceae	**Rasa:** Katu-Tikta-Kashaya **Guna:** Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kaphahara	Deepana, Arshoghna, Kandughna, Amahara
Kiratatikta	*Swertia chirata* (Wall.) C.B.Cl. Gentianaceae	**Rasa:** Tikta **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Stanya shodhana, Trishna nigrahana
Katurohini	*Picrorrhiza kurroa* Royle ex Benth. Scrophulariaceae	**Rasa:** Tikta **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Bhedana
Sariva	*Hemidesmus indicus* R. B Apocynaceae	**Rasa:** Madhura-Tikta **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara	Amavishahara, Jwarahara, Daha prashamana, Stanya shodhana, Varnya, Kantya

19. शुक्रजनन

शुक्रं जनयति इति शुक्रजननम् । (Yogindranath Sen Commentary on Ca.S.Su 4/8)

Drugs having spermatogenic effect or those which improves the quantity of sperm are known as Shukrajanana Dravyas.

General properties of Shukra janana Gana:

These drugs have Guru-Snigdha, Sheeta, Madhura Rasa and Vipaka. Shukra Dhatu is predominant in Ap Mahabhuta, which is similar in properties; hence directly increases the Shukra dhatu. These will help to obtain good quantity of sperm. They are having aphrodisiac, body stabilizing and strengthening properties. It can be used in Shandata/Kleebata (Impotency), Ksheena shukra (Oliospermia) etc.

जीवकर्षभककाकोलीक्षीरकाकोलीमुद्गपर्णीमाषपर्णीमेदावृद्धरुहाजटिलाकुलिङ्गा इति दशेमानि शुक्रजननानि भवन्ति । (C.S.Su 4/12)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Jeevaka	*Microstylis wallichii* Linn. Orchidaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Balya, Brimhana Shukrala
Rishabhaka	*Microstylis muscifera* (Lindl.) Ridl. Orchidaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Balya, Brimhana, Shukrala
Kakoli	*Roscoea purpurea* Smith Zingiberaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Shukrala, Brimhana, Stanyakara, Jeevana, Vrishya
Ksheera Kakoli	*Lilium polyphyllum* D. Don. Liliaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Brimhana, Vrishya, Basti shodhini, Stanyakara
Mudgaparni	*Phaseolus trilobus* Ait. Fabaceae	**Rasa:** Madhura **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara	Shukra janana
Mashaparni	*Teramnus labialis* Spreng. Fabaceae	**Rasa:** Madhura-Tikta **Guna:** Laghu, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Shukrala, Vrishya, Asrajit, Sangrahi, Pushtivardhini
Meda	*Poligonatum verticillatum* Linn. Asparagaceae	**Rasa:** Madhura **Guna:** Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Shukrala, Brimhana, Stanyakara, Jeevana, Vrishya

Vriddharuha/ Shatavari	*Asparagus racemosus* Willd. Asparagaceae	**Rasa:** Tikta-Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Rasayana, Shukrala, Stanyakari, Balya
Jatila/ Ucchata	*Acorus calamus* Linn. Araceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Medhya, Pachana, Deepana, Kantya, Vibandhahara, Shakritmutra vishodhini
Kulinga/ Ucchata bheda	*Iris germanica* Linn. Iridaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Medhya, Pachana, Deepana, Kantya, Vibandhahara, Shakritmutra vishodhini

20. शुक्रशोधन

दूषितं शुक्रं शोधयतीति शुक्रशोधनम् । (Yogindranath Sen Commentary on Ca.S.Su 4/8)

These drugs will help to purify the semen qualitatively.

General properties of Shukra Shodhana Gana:

The drugs are having Tikta/ Tikta-Kashaya-Katu rasa, Katu vipaka and Ushna Veerya are responsible for the Shodhana action in the body. Laghu guna and Ushna Veerya of few drugs help to improve the Agni and thereby the metabolism of the body. This eventually helps for the formation of Shuddha Shukra as well.

कुष्ठैलवालुककट्फलसमुद्रफेनकदम्बनिर्यासेक्षुकाण्डेक्षिक्षुरकवसुकोशीराणीति दशेमानि शुक्रशोधनानि भवन्ति । (C.S.Su 4/12)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Kushta	*Sassurea lappa* C. B. Clarke. Asteraceae	**Rasa:** Tikta-Katu-Madhura **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Raktashodhaka, Varnya, Shukrala

Elava-luka	*Prunus cerasus* (L.) Clairv. Rosaceae	**Rasa:** Kashaya **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Katu	Kapha-vatahara	Kndughna, Krimighna
Kat-phala	*Myrica esculenta* Buch. - Ham. Myricaceae	**Rasa:** Kashaya-Tikta-Katu **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Vedana sthapana, Shukra shodhana, Sandhaneeya
Samu-dra phena	*Sepia afficinalis* - Cuttle fish Sepiidae	**Rasa:** Kashaya **Guna:** Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Pitta-kaphahara	Lekhana, Deepana, Pachana, Chakshushya
Kada-mba niryasa	*Anthocephalus cadamba* (Roxb) Miq Rubiaceae	**Rasa:** Tikta-Kashaya **Guna:** Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Trido-shahara	Vrana ropana, Vedana sthapana, Shukra shodhana
Ikshu	*Saccharum officinarum* Linn. Poaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Balya, Vrishya, Mutrala
Kan-dekshu	*Saccharum spontaneum* Linn. Poaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Kapha-pittahara	Vrishya, Mutrala
Ikshu-raka/ Kokila-ksha	*Asteracantha longifolia* Nees. Acanthaceae	**Rasa:** Madhura-Amla-Tikta **Guna:** Picchila **Veerya:** Sheeta **Vipaka:** Madhura	Vatahara	Vrishya, Stanya janana
Vasuka	*Calotropis gigantea* R. Br ex Ait. Asclepiadaceae	**Rasa:** Tikta **Guna:** Laghu **Veerya:** Ushna **Vipaka:** Katu	Kaphahara	Kushtaghna, Krimighna, Rechana, Deepana, Pachana

Usheera	*Vetiveria ziznoides* Nash. Poaceae	**Rasa:** Tikta **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Daha prashamana, Shukra shodhana, Stanya janana, Varnya

21. स्नेहोपग

स्नेहस्य सर्पिरादेः स्नेहनक्रियायां सहायत्वेनोपगच्छतीति स्नेहोपगम् । (Gangadhara Commentary on Ca.S.Su 4/8)

The word 'Upaga' refers to 'helpful' or 'joining with'. The drugs which are helpful to enhance the Snehana Karma (oleation procedure) are known as Snehopaga dravyas. These drugs will help the main Sneha Dravyas (Ghrita, taila etc.) in carrying the process of Snehana.

General properties of Snehopaga Gana:

Most of the drugs are having Madhura Rasa, Guru-Snigdha Guna, Sheeta Veerya, undergo Madhura Vipaka. Hence predominant with Prithvi and Ap Mahabhuta. These properties help to enhance the Snehana Karma in the body.

मृद्वीकामधुकमधुपर्णीमेदाविदारीकाकोलीक्षीरकाकोलीजीवकजीवन्तीशालपर्ण्य इति दशेमानि स्नेहोपगानि भवन्ति । (C.S.Su 4/13)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Mrid-weeka	*Vitis vinifera* Linn. Vitaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha-Mridu **Veerya:** Sheeta **Vipaka:** Madhura **Prabhava:** Virechaka	Kapha-pittahara	Brimhana, Swarya, Vrishya, Mutrala
Madhu-ka/ Yashti-madhu	*Glyccyrrhiza glabra* Linn. Fabaceae	**Rasa:** Madhura **Guna:** Guru, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Medhya rasayana, Chakshushya, Shukrala, Keshya , Swarya

Madhuparni/ Guduchi	*Tinospora cordifolia* Miers. Menispermaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Laghu-Guru-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Deepana, Rasayana, Jwaraghna
Meda	*Polygonatum verticillatum* Linn. Aspargaceae	**Rasa:** Madhura **Guna:** Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Shukrala, Brimhana, Stanyakara, Jeevana, Vrishya
Vidari	*Peuraria tuberosa* (Roxb. Ex Willd. DC.) Fabaceae	**Rasa:** Madhura **Guna:** Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Pitta-vatahara	Brimhana, Shukrala, Stanyakara, Vrishya, Balya, Rasayana
Kakoli	*Roscoea purpurea* Smith Zingiberaceae	**Rasa:** Madhura **Guna:** Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Shukrala, Brimhana, Stanyakara, Jeevana, Vrishya
Ksheera Kakoli	*Lilium polyphyllum* D. Don Liliaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Brimhana, Vrishya, Basti shodhini, Stanyakara
Jeevaka	*Microstylis wallichii* Linn. Orchidaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Balya, Brimhana, Shukrala
Jeevanti	*Leptadenia reticulata* W & A Apocynaceae	**Rasa:** Madhura **Guna:** Laghu, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara	Grahi, Chakshushya, Balya, Brimhana

Shalaparni	*Desmodium gangeticum* D C. Fabaceae	**Rasa:** Madhura-Tikta **Guna:** Guru-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Balya, Vrishya, Brimhana, Rasayana

22. स्वेदोपग

स्वेदन द्रव्यस्य अग्न्यादेः स्वेदनक्रियायां सहायत्वनोपगच्छतीति स्वेदोपगम् । (Chakrapani commentary on ca.s.su 4/8)

The drugs which promote the action of Swedana (sudation – induces sweating) is known as Swedanopaga.

General properties of Swedopaga Gana:

Almost all the drugs are having Katu-Tikta Rasa, Laghu-Ruksha guna, Ushna Veerya, Katu Vipaka. They are predominant with Agni Mahabhuta. They increase the heat in the body; which induces the cellular metabolism. These properties help to clear the channels (Srotoshodhana) and softens the channels (Sroto mardavakara).

शोभाञ्जनकैरण्डार्कवृश्चीरपुनर्नवायवतिलकुलत्थमाषबदराणीति दशेमानि स्वेदोपगानि भवन्ति । (C.S.Su 4/13)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Shobhanjanaka	*Moringa oleifera* Lam. Moringaceae	**Rasa:** Katu-Madhura **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Deepana, Krimighna, Shirovirechanopaga, Chakshushya
Eranda	*Ricinus communis* Linn. Euphorbiceae	**Rasa:** Madhura-Katu-Kashaya **Guna:** Snigdha-Teekshna-Ruksha **Veerya:** Ushna **Vipaka:** Madhura	Vata-kaphahara	Vrishya (root) Deepana, Vayasthapana, Rechana (seed)

Arka	*Calotropis gigantea* R. Br ex Ait. Asclepiadaceae	**Rasa:** Tikta **Guna:** Laghu **Veerya:** Ushna **Vipaka:** Katu	Kapha-hara	Kushtaghna, Krimighna, Rechana, Deepana, Pachana
Vrish-cheera/ Puna-rnava	*Trianthema portulacastrum* L. (White variety) Aizoaceae	**Rasa:** Katu-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Grahi, Vayasthapana, Shotha nashana
Punar-nava	*Boerhavia diffusa* Linn. (Red variety) Nyctaginaceae	**Rasa:** Katu-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Grahi, Vayasthapana, Shotha nashana
Yava	*Hordeum vulgare* Linn. Poaceae	**Rasa:** Kashaya-Madhura **Guna:** Guru-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Pitta-kaphahara	Sara, Agni vardhana, Balakara, Vrishya, Pramehajit
Tila	*Sesamum indicum* Linn. Pedaliaceae	**Rasa:** Katu-Tikta-Madhura **Guna:** Guru-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Kapha-pittahara	Twachya, Balya, Keshya, Dantya, Grahi
Kulat-tha	*Dolichus biflorus* Linn. Fabaceae	**Rasa:** Tikta **Guna:** Laghu **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Vidahi, Medohara, Sweda janana, Sara
Masha	*Phaseolus mungo* L. Fabaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Vatahara	Balya, Brimhana, Stanyavardhaka

Badara	*Ziziphus jujuba* Lam. Rhamnaceae	**Rasa:** Madhura-Amla **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vatahara	Bhedana, Hridya, Grahi, Brimhana

23. वमनोपग

वमनद्रव्यस्य मदनफलादेर्वमनक्रियायां सहायत्वेनोपगच्छतीति वमनोपगम् । (Chakrapani Commentary on Ca.S.Su 4/8)

Drugs which help to induce vomiting are known as Vamanopaga. Eg.. – Madanaphala.

In Bala, Sukumara and Vriddha, Vamanopaga drugs is sufficient to induce Vamana. In Heena Yoga or Ayoga of Vamana Karma, Lavanodaka, Yashtimadhu Phanta etc Vamanopaga Dravyas can be used to induce Vamana.

General properties of Vamanopaga Gana:

वमनद्रव्याण्यग्निवायुगुणभूयिष्ठानि, अग्निवायु हि लघु, लघुत्वाच्च तान्यूर्ध्वमुत्तिष्ठं..... । (S.S.Su 41/6)

These Dravyas predominate with Agni and Vayu Mahabhuta. They are light, hence helpful to bring the Doshas from Amashaya in upward direction and expels out. They possess Ushna, Teekshna, Laghu, Sookshma Guna.

मधुमधुककोविदारकर्बुदारनीपविदुलबिम्बीशणपुष्पीसदापुष्पाप्रत्यक्पुष्पा इति दशेमानि वमनोपगानि भवन्ति । (C.S.Su 4/13)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Madhu	Honey	**Rasa:** Madhura-Kashaya **Guna:** Laghu-Ruksha-Vishada **Veerya:** Ushna **Vipaka:** Madhura	Kapha-pittahara	Varnya, Vrana shodhana, Vrana ropana, Lekhana, Chakshushya
Madhuka/ Yashti-madhu	*Glyccyrrhiza glabra* Linn. Fabaceae	**Rasa:** Madhura **Guna:** Guru, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Medhya rasayana, Chakshushya, Shukrala, Keshya , Swarya

Kovidara	*Bauhinia purpurea* Linn. Fabaceae	**Rasa:** Kashaya **Guna:** Ruksha-Laghu **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Grahi, Gandamalapaha, Kushtaghna
Karbudara/ Shweta Kanchana	*Bauhinia variegata* Linn. Fabaceae	**Rasa:** Kashaya **Guna:** Ruksha-Laghu **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Grahi, Gandamalapaha, Kushtaghna
Neepa/ Kadamba	*Anthocephalus cadamba* (Roxb) Miq Rubiaceae	**Rasa:** Tikta-Kashaya **Guna:** Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Tridoshahara	Vrana ropana, Vedana sthapana, Shukra shodhana
Vidula/ Hijjala	*Barringtonia acutangula* Gaertn. Lecythidaceae	**Rasa:** Tikta-Katu **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Vatahara	Bhuta nashana, Grahi
Bimbi	*Coccinia grandis* (Linn.) Voigt. Cucurbitaceae	**Rasa:** Madhura-Tikta **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Stambhana, Lekhana, Vamaka
Shanapushpi	*Crotalaria verrucosa* Linn. Fabaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-pittahara	Vamaka
Sadapushpi/ Arka	*Calotropis gigantia* R. Br. Ait. Asclepiadaceae	**Rasa:** Tikta **Guna:** Laghu **Veerya:** Ushna **Vipaka:** Katu	Kaphahara	Kushtaghna, Krimighna, Rechana, Deepana, Pachana
Pratyakpushpi/ Apamarga	*Achyranthes aspera* Linn. Amaranthaceae	**Rasa:** Tikta-Katu **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Deepana, Pachana, Shirovirechanopaga, Krimighna

24. विरेचनोपग

विरेचनद्रव्यस्य त्रिवृतादेर्विवेचनकियायां सहायत्वेनोपगच्छतीति विरेचनोपगम् ।

(Chakrapani Commentary on Ca.S.Su 4/8)

Those drugs which assist Virechana Dravyas for acheiving Virechana Karma.

General properties of Virechanopaga Gana:

पृथिव्यापौ गुर्व्यः तानि गुरुत्वादधो गच्छन्ति; तस्माद्विरेचनमधोगुणभूयिष्ठमनुमानात्..... । (S.S.Su 41/6)

These drugs are predominant with Prithvi and Ap Mahabhuta. As they have Guru Guna, the Utklishta Doshas moves in downward direction. Most of drugs of this Gana possess Madhura Rasa, Guru-Snigdha Guna, Sheeta Veerya, Madhura Vipaka. They helps for the downward movement of the Doshas.

द्राक्षाकाश्मर्यपरुषकाभयामलकविभीतककुवलबदरकर्कन्धुपीलूनीति दशेमानि विरेचनोपगानि भवन्ति ।

(C.S.Su 4/13)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Draksha	*Vitis vinifera* Linn. Vitaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha-Mridu **Veerya:** Sheeta **Vipaka:** Madhura **Prabhava:** Virechaka	Kapha-pittahara	Brimhana, Swarya, Vrishya, Mutrala
Kashmarya/ Gambhari	*Gmelina arborea* Linn. Verbenaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Guru **Veerya:** Ushna Fruit - Sheeta **Vipaka:** Katu	Vata-pittahara	Shothahara, Daha prashamana, Deepana Fruit – Brimhana, Vrishya
Parushaka	*Grewia asiatica* Linn. Malvaceae	**Rasa:** Madhura **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Pitta-vatahara	Hridhya, Brimhana

Abhaya/ Haritaki	*Terminalia chebula* Linn. Combretaceae	**Rasa:** Lavana varjita pancha rasa **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Deepana, Rasayana, Anulomana, Chakshushya
Amalaki	*Emblica officinalis* Gaertn. Euphorbiaceae	**Rasa:** Pancha rasa except Lavana **Guna:** Guru-Ruksha **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara	Vrishya, Rasayana, Chakshushya, Vayasthapana, Kushtaghna
Vibhitaki	*Terminalia bellerica* Roxb. Combretaceae	**Rasa:** Kashaya **Guna:** Ruksha-Laghu **Veerya:** Ushna **Vipaka:** Madhura	Kapha-pittahara	Chakshushya, Bhedana, Keshya
Kuvala	*Ziziphus sativa* Gaertn. Rhamnaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Bhedana, Shukrala, Brimhana
Badara	*Ziziphus jujuba* Lam. Rhamnaceae	**Rasa:** Madhura-Amla **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vatahara	Bhedana, Hridya, Grahi, Brimhana
Karkandhu	*Ziziphus nummularia* W. & A. Rhamnaceae	**Rasa:** Madhura-Amla **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Shukrala, Brimhana
Peelu	*Salvadora persica* Linn. Salvadoraceae	**Rasa:** Madhura-Tikta **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Virechana

25. आस्थापनोपग

आस्थापन द्रव्याणां पाटलादीनामास्थापनक्रियायां सहायत्वेनोपगच्छतीति आस्थापनम् । (Chakrapani Commentary on C.S.Su 4/8)

वयः स्थापनात् आयुः स्थापनात् वा आस्थापनम् । (S.S.Chi 35/18)

Drugs which help in the Asthapana Karma are called as Asthapanopaga. Asthapana is that which establishes the Vaya (age) and Ayu (life span). Asthapana Dravyas help to expel the Pakvashayagata Doshas through the Guda marga. By expelling the morbid Doshas out of the body, Asthapana Basti establishes health in individual. Asthapana Basti or Niruha Basti is a medicated enema prepared by the use of Kalka or Kwatha made from Shodhana Dravyas.

General properties of Asthapanopaga Gana:

As the Asthapana is a purificatory therapy, the drugs should possess the property to expel the Doshas from Pakwashaya region. The drugs have Katu-Tikta-Kashaya Rasa, Laghu-Ruksha-Teekshna Guna, Ushna Veerya and Katu Vipaka; which helps to expel the Doshas out of the Pakwashaya.

त्रिवृद्बिल्वपिप्पलीकुष्ठसर्षपवचावत्सकफलशतपुष्पामधुकमदनफलानीति दशेमान्यास्थापनोपगानि भवन्ति । (C.S.Su 4/13)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Trivrit	*Operculina turpethum* R. B. Covolvulaceae	**Rasa:** Tikta-Katu **Guna:** Ruksha-Teekshna-Laghu **Veerya:** Ushna **Vipaka:** Katu	Tridoshahara	Sukha virechana
Bilva	*Aegle marmelos* Corr. Rutaceae	**Rasa:** Kashaya-Tikta **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Shothahara, Arshoghna, Pachana, Deepana Pakva phala – Vishtambhi, Vidahi
Pippali	*Piper longum* Linn. Piperaceae	**Rasa:** Katu **Guna:** Snigdha-Laghu-Teekshna **Veerya:** Ushna (Dry), Sheeta (Fresh) **Vipaka:** Madhura	Vata-kaphahara	Deepana, Shoola prashamana, Vrishya, Rasayana

Kushta	*Sassurea lappa* C. B. Clarke. Asteraceae	**Rasa:** Tikta-Katu-Madhura **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Raktashodhaka, Varnya, Shukrala
Sarsha-pa	*Brassica compestris* Linn. var. sarson Prain Brassicaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Deepana, Kandughna, Kushtaghna
Vacha	*Acorus calamus* Linn. Araceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Medhya, Pachana, Deepana, Kantya, Vibandhahara, Shakritmutra vishodhini
Vatsaka-phala/ Kutaja phala	Fruit of *Holarrhena antidysenterica* Wall. Apocynaceae	**Rasa:** Katu-Tikta-Kashaya **Guna:** Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-hara	Deepana, Arshoghna, Kandughna, Amahara
Shata-pushpa	*Anethum sowa* Roxb. Apiaceae	**Rasa:** Tikta-Katu **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Deepana, Vrishya
Madhu-ka/ Yashti-madhu	*Glyccyrrhiza glabra* Linn. Fabaceae	**Rasa:** Madhura **Guna:** Guru, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Medhya rasayana, Chakshushya, Shukrala, Keshya , Swarya
Mada-naphala	*Randia dumetorum* Lam. Rubiaceae	**Rasa:** Madhura-Tikta **Guna:** Ruksha-Laghu **Veerya:** Ushna **Vipaka:** Katu	Kaphahara	Vamana, Lekhana

26. अनुवासनोपग

अनुवासन द्रव्यस्य तैलादनुवासनक्रियायां सहायत्वेनोपगच्छतीत्यनुवसनोपगम् ।

(Chakrapani Commentary on C.S.Su 4/8)

Dravyas which aid the action of Anuvasana Dravyas are called Anuvasanopaga.

General properties of Anuvasanopaga:

Most of the drugs of this group are having Guru-Snigdha Guna, Ushna Veerya and Katu Vipaka. As the Basti Dravya is Taila or Ghrita or any Sneha Dravyas, the Guru-Snigdha properties present in them, helps to attain Vatanulomana.

रास्नासुरदारुबिल्वमदनशतपुष्पावृश्चीरपुनर्नवाश्वदंष्ट्राग्निमन्थश्योनाका इति दशेमान्यनुवासनोपगानि भवन्ति । (C.S.Su 4/13)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Rasna	*Pluchea lanceolata* Oliver & Hiern. Asteraceae	**Rasa:** Tikta **Guna:** Guru **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Ama pachana, Shothaghna, Vishaghna
Suradaru/ Devadaru	*Cedrus deodara* Loud. Pinaceae	**Rasa:** Tikta-Kashaya **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Deepana, Stanya shodhana
Bilva	*Aegle marmelos* Corr. Rutaceae	**Rasa:** Kashaya-Tikta **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Shothahara, Arshoghna, Pachana, Deepana Pakva phala–Vishtambhi, Vidahi
Madana phala	*Randia dumetorum* Lam. Rubiaceae	**Rasa:** Madhura-Tikta **Guna:** Ruksha-Laghu **Veerya:** Ushna **Vipaka:** Katu	Kapha-hara	Vamana, Lekhana
Shata-pushpa	*Anethum sowa* Roxb. Apiaceae	**Rasa:** Tikta-Katu **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Deepana, Vrishya

Vrish-cheera/ Puna-rnava	*Trianthema portulacastrum* L. (White variety) Aizoaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Vata-kaphahra	Deepana, Grahi, Vayasthapana, Shotha nashana
Punar-nava	*Boerhavia diffusa* Linn. (Red variety) Nyctaginaceae	**Rasa:** Katu-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Grahi, Vayasthapana, Shotha nashana
Shwad-amsh-tra/ Gok-shura	*Tribulus terrestris* Linn. Zygophyllaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vatahara	Deepana, Vrishya, Vasti-shodhana
Agni-mantha	*Premna mucronata* Roxb. Verbenaceae	**Rasa:** Kashaya-Tikta-Katu **Guna:** Ruksha-Laghu **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Shothahara
Shyo-naka	*Oroxylum indicum* Vent. Bignoniaceae	**Rasa:** Kashaya-Tikta-Madhura **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Vata-kaphahara	Grahi, Deepana

27. शिरोविरेचनोपग

शिरोविरेचनोपगे तु शिरोविरेचन प्रधान्येव द्रव्याणि बोद्धव्यानि । (Gangadhara Commentary on C.S. Su 4/8)

The drugs which aid the action of Shirovirechana Dravyas to perform Shirovirechana Karma.

General properties of Shirovirechanopaga Gana:

Most of the drugs possess Katu Rasa, Laghu-Ruksha-Teekshna Guna, Ushna Veerya and Katu Vipaka; helps to eliminate the aggravated Kapha from the Shiras. Ushna, Teekshna Guna Dravyas helps to liquefy the obstructed Kapha in the Srotas and expels it out.

ज्योतिष्मतीक्षवकमरिचपिप्पलीविडङ्गशिग्रुसर्षपापामार्गतण्डुलश्वेतामहश्वेता इति दशेमानि शिरोविरेचनोपगानि भवन्ति । (C.S.Su 4/13)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Jyotish-mati	*Celastrus paniculatus Willd.* Celastraceae	**Rasa:** Katu-Tikta **Guna:** Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Medhya, Shirovirechana, Kushtaghna
Ksha-vaka	*Centipeda minima* A. Br. Et. Aschers. Asteraceae	**Rasa:** Katu **Guna:** Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kapha-hara	Deepana, kushtaghna
Mari-cha	*Piper nigrum* Linn. Piperaceae	**Rasa:** Katu **Guna:** Laghu-Teekshna-Ruksha **Veerya:** Ushna **Vipaka:** Katu (dry), Madhura (fresh)	Kapha-vatahara	Deepana, Shoola prashamana, Krimighna
Pippali	*Piper longum* Linn. Piperaceae	**Rasa:** Katu **Guna:** Snigdha-Laghu-Teekshna **Veerya:** Ushna (Dry), Sheeta (Fresh) **Vipaka:** Madhura	Vata-kapha-hara	Deepana, Shoola prashamana, Vrishya, Rasayana
Vida-nga	*Embelia ribes* Burm f. Myrsinaceae	**Rasa:** Katu-Kashaya **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Krimighna, Kushtaghna, Shiro virechana, Deepana
Shigru	*Moringa oleifera* Lam. Moringaceae	**Rasa:** Katu-Madhura **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Deepana, Krimighna, Shirovirechanopaga, Chakshushya

Sarshapa	*Brassica compestris* Linn. var. sarson Prain Brassicaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Deepana, Kandughna, Kushtaghna
Apamarga tandula	Seeds of *Achyranthes aspera* Linn. Amaranthaceae	**Rasa:** Tikta-Katu **Guna:** Teekshna **Veerya:** Sheeta **Vipaka:** Katu	Kapha-vatahara	Deepana, Pachana, Shirovirechanopaga, Krimighna
Shweta/ Aparajita	*Clitorea turnatea* Linn. Fabaceae	**Rasa:** Katu-Tikta-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Tridoshahara	Medhya, Vishahara
Maha Shweta/ Katabhi	A variety of *Clitorea turnatea* Linn. Fabaceae	**Rasa:** Katu-Tikta-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Tridoshahara	Medhya, Vishahara

28. छर्दिनिग्रहण

छर्दिनिगृह्णाति स्तम्भयतीति छर्दिनिग्रहणं व्याधिहरण वचनेन तद्धेतु दोषहराणामपि लभ्यते, रावं पत्रादि ।
(Gangadhara Commentary on C.S.Su 4/8)

Drugs which stops vomiting is called as Chardi nigrahana.

General properties of Chardi nigrahana Gana:

Madhura Rasa is predominant of Prithvi and Ap Mahabhuta, which are Adhobhagahara in nature. Kashaya Rasa and Sheeta Veerya stops the vomiting by its Stambhana property. Laghu-Ruksha Guna helps for the digestion of Ama and improves the status of Agni.

जम्ब्वाम्रपल्लवमातुलुङ्गाम्लबदरदाडिमयवयष्टिकोशीरमृल्लाजा इति दशेमानि छर्दिनिग्रहणानि भवन्ति ।
(C.S.Su 4/14)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Jambu	*Syzygium cumini* (Linn.) Skeels. Myrtaceae	**Rasa:** Kashaya-Madhura-Amla **Guna:** Guru-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Grahi, Mutra sangrahaneeya
Amra-pallava	Tender leaves of *Mangifera indica* Linn. Anacardaceae	**Rasa:** Madhura-Kashaya-Amla **Guna:** Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Mutra sangrahaneeya, Hridya, Grahi, Vrishya
Matulunga	*Citrus medica* Linn. Rutaceae	**Rasa:** Madhura-Amla **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Amla	Vata-kaphahara	Deepana, Hridya, Grahi
Badara	*Ziziphus jujuba* Lam. Rhamnaceae	**Rasa:** Madhura-Amla **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vatahara	Bhedana, Hridya, Grahi, Brimhana
Dadima	*Punica granatum* Linn. Punicaceae	**Rasa:** Madhura-Amla-Kashaya **Guna:** Snigdha-Laghu **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Tarpana, Hridya, Shukrala, Balya
Yava	*Hordeum vulgare* Linn. Poaceae	**Rasa:** Kashaya-Madhura **Guna:** Guru-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Pita-kaphahara	Sara, Agni vardhana, Balakara, Vrishya, Pramehajit
Yashtika/ Yashtimadhu	*Glycyrrhiza glabra* Linn. Fabaceae	**Rasa:** Madhura **Guna:** Guru, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Medhya rasayana, Chakshushya, Shukrala, Keshya, Swarya

Usheera	*Vetiveria ziznoides* Nash. Poaceae	**Rasa:** Tikta **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Daha prashamana, Shukra shodhana, Stanya janana, Varnya
Mrit	Mud	**Rasa:** Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Pittahara	Dahashamaka, Trishnahara Rakta stambhaka, Chardihara
Laja	Parched rice	**Rasa:** Madhura **Guna:** Laghu, Alpa ruksha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Tarpana, Deepana, Balya Chardi-Atisara-Daha-Shrama-Meha-Meda-Trishapaha

29. तृष्णानिग्रहण

तृष्णां निहृगृह्णति स्तम्भयतीति तृष्णानिग्रहणम् । (Gangadhara Commentary on C.S.Su 4/8)

Dravyas which satisfies excessive thirst is called as Trishna nigrahana.

General properties of Trishna nigrahana Gana:

Aggravation of Pitta causes excess thirst. Hence, Madhura-Tikta-Kashaya Rasa, Guru-Snigdha Guna, Sheeta Veerya and Madhura Vipaka Dravyas does the Shamana of aggravated Pitta. If the Trishna is due to indigestion, Tikta Rasa helps for Ama Pachana and thereby cause Trishna nigrahana.

नागरधन्वयासकमुस्तपर्पटकचन्दनकिराततिक्तकगुडूचीहीवेरधान्यकपटोलानीति दशेमानि तृष्णानिग्रहाणि भवन्ति । (C.S.Su 4/14)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharma-co-therapeutic action
Nagara	*Zingiber officinalis* Rosc. Zingiberaceae	**Rasa:** Katu **Guna:** Guru-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Madhura	Vata-kapha-hara	Deepana, Bhedana, Shoola prashamana

Dhanvayasa	*Fagonia cretica* Linn. Zygophyllaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Jwarahara
Musta	*Cyperus rotundus* Linn. Cyperaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Pachana, Grahi, Krimighna
Parpataka	*Fumaria parviflora* Lam. Fumariaceae	**Rasa:** Tikta **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Katu	Pitta-kapha-hara	Trishnahara, Jwaragna, Grahi
Chandana	*Santalum album* Linn. Santalaceae	**Rasa:** Tikta-Madhura **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Varnya, Vishahara, Dahaprashamana
Kiratatikta	*Swertia chirata* (Wall.) C.B.Cl. Gentianaceae	**Rasa:** Tikta **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Stanya shodhana, Trishna nigrahana
Guduchi	*Tinospora cordifolia* Miers. Menispermaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Laghu-Guru-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Deepana, Rasayana, Jwaraghna
Hreevera	*Pavonia odorata* Willd. Malvaceae	**Rasa:** Tikta **Guna:** Ruksha-Laghu **Veerya:** Sheeta **Vipaka:** Katu	Pitta-kapha-hara	Deepana, Pachana, Keshya
Dhanyaka	*Coriandrum sativum* Linn. Apiaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara Pittahara (Ardra)	Trishnahara, Rochana, Deepana

Patola	*Trichosanthes dioica* Linn. Cucurbitaceae	**Rasa:** Tikta-Katu **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Tridosha-hara	Deepana, Pachana, Rechana

30. हिक्कानिग्रहण

हिक्कां निगृह्णति स्तम्भयतीति हिक्कानिग्रहणम् । (Gangadhara Commentary on Ca.S.Su 4/8)

That which stops hiccough is called Hikka nigrahana.

General properties of Hikka nigrahana Gana:

Hiccups are caused by obstructed Vata due to the aggravation of Kapha Dosha in Pranavaha Srotas. Drugs possessing Katu-Tikta Rasa, Laghu-Ruksha Guna, Ushna Veerya and Katu Vipaka alleviates the aggravated Kapha Dosha and helps for the Srotoshodhana. This in turn cause the Anulomana of Udana and Prana obstructed by Kapha.

शटीपुष्करमूलवदरवीजकण्टकारिकावृहतीवृक्षरुहाभयापिप्पलीदुरालभाकुलीरशृङ्ग्य इति दशेमानि हिक्कानिग्रहणानि भवन्ति । (C.S.Su 4/14)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Shati	*Hedychium spicatum* ham. Ex Smith. Zingiberaceae	**Rasa:** Kashaya-Tikta-Katu **Guna:** Laghu-Teekshna **Veerya:** Anushna/Ushna **Vipaka:** Katu	Kapha-vatahara	Shwasahara, Grahi
Push-kara-mula	*Inula racemosa* Hook. f. Asteraceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Hikka-Shwasahara, Parshwashu-lahara
Badara beeja	*Ziziphus jujuba* Lam. Rhamnaceae	**Rasa:** Madhura-Amla **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vatahara	Bhedana, Hridya, Grahi, Brimhana

Kanta-karika	*Solanum xanthocarpum* Schrad. & Wendl. Solanaceae	**Rasa:** Tikta-Katu **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Sara, Deepana, Pachana
Brihati	*Solanum indicum* Linn. Solanaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Pachana, Shothahara, Grahi
Vriksha-ruha/ Bandaka	*Dendrophthoe falcata* (L.f.) Ettingsh Loranthaceae	**Rasa:** Kashaya-Tikta-Madhura **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Tridosha-hara	Vishaghna, Vranapaha
Abhaya/ Haritaki	*Terminalia chebula* Linn. Combretaceae	**Rasa:** Lavana varjita pancha rasa **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Madhura	Tridosha-hara	Deepana, Rasayana, Anulomana, Chakshushya
Pippali	*Piper longum* Linn. Piperaceae	**Rasa:** Katu **Guna:** Snigdha-Laghu-Teekshna **Veerya:** Ushna (Dry), Sheeta (Fresh) **Vipaka:** Madhura	Vata-kaphahara	Deepana, Shoola prashamana, Vrishya, Rasayana
Dural-abha/ Dhanva-yasa	*Fagonia cretica* Linn. Zygophyllaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Jwarahara
Kuleer-ashringi/ Karkata-shringi	*Pistacia integerrima* Linn. Anacardaceae	**Rasa:** Kashaya-Tikta **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Deepana, Grahi

31. पुरीषसङ्ग्रहणीय

पुरीष संग्रहणं पुरीषस्य स्तम्भन, तस्मै हितम् । (Chakrapani Commentary on C.S.Su 4/8)

पुरीषसंग्रहणानि भिन्नमलमात्रसंग्रहणानि प्रभावात् । (Gangadhara Commentary on C.S.Su 4/8)

Drugs which are capable to bind the stools or stop the loose stools is Pureeshasangrahaneeya.

General properties of Pureesha sangrahaneeya Gana:

The drugs mentioned under this Gana possess Kashaya Rasa, Sheeta Veerya. These predominant with Vayu Mahabhuta. Ruksha Guna have the property of absorbing excess water content in the colon (Drava Shoshana property). As these Dravyas does the Stambhana Karma, indicated in Pakwatisara (Nirama stage). These cannot be used in Amatisara; as Kashaya Rasa, Sheeta Veerya does the Ama stambhana, which is contraindicated in Amatisara.

प्रियङ्ग्वनन्ताम्रास्थिकट्वङ्गलोध्रमोचरससमङ्गाधातकीपुष्पपद्मापद्मकेशराणीति दशेमानि पुरीषसङ्ग्रहणीयानि भवन्ति । (C.S.Su 4/15)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Priyangu	*Callicarpa macrophylla* Vahl. Verbenaceae	**Rasa:** Tikta-Madhura-Kashaya **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Katu	Vata-pittahara	Vishahara, Grahi, Mutra virajaneeya
Ananta	*Hemidesmus indicus* R. B Apocynaceae	**Rasa:** Madhura-Tikta **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Tridosha-hara	Amavishahara, Jwarahara, Daha prashamana, Stanya shodhana, Varnya, Kantya
Amrasthi	Seed coat of *Mangifera indica* Linn. Anacardaceae	**Rasa:** Madhura-Kashaya-Amla **Guna:** Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Mutra sangrahaneeya, Hridya, Grahi, Vrishya
Katvanga/ Shyonaka	*Oroxylum indicum* Vent. Bignoniaceae	**Rasa:** Kashaya-Tikta-Madhura **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Vata-kapha-hara	Grahi, Deepana
Lodhra	*Symplocos racemosa* Roxb. Symplocaceae	**Rasa:** Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Grahi, Shonita sthapana, Purisha sangrahaneeya
Mocharasa	*Salmalia malabarica* Schott & Endl. Bombaceae	**Rasa:** Kashaya **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Pitta-vatahara	Grahi, Vrishya,
Samanga/ Lajjalu	*Mimosa pudica* Linn. Fabaceae	**Rasa:** Tikta-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Sandhaneeya, Pureesha sangrahaneeya
Dhatakipushpa	*Woodfordia fruticosa* Kurz. Lythraceae	**Rasa:** Katu-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Madakari, Garbhasthapani, Atisarahara
Padma/ Bhargi	*Clerodendrum serratum* Moon. Verbenaceae	**Rasa:** Katu-Tikta-Kashaya **Guna:** Ruksha-Laghu **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Kasahara, Pachana, Deepana
Padma kesara	Stamens of *Nelumbo nucifera* Gaertn. Nelumbonaceae	**Rasa:** Madhura **Guna:** Picchila-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Grahi, Varnya, Daha prashamana

32. पुरीषविरजनीय

पुरीषस्य विरजनं दोषसम्बन्धनिरासं करोतीति पुरीषविरजनीयः । (Chakrapani Commentary on C.S. Su 4/8)

Pureesha virajaneeya Dravyas help to bring back the normal colour to Dushita Pureesha (vitiated) by eliminating the aggravated Doshas.

General properties of Pureesha Virajaneeya Gana:

Normal colour of Pureesha is based on the status of Pachaka Pitta. Vitiated Pachaka Pitta imparts abnormal colour to Pureesha. Tikta-Kashaya-Madhura Rasa, Sheeta Veerya, Madhura Vipaka alleviates the Pitta and the Pureesha attains normal colour.

जम्बुशल्लकीत्वक्कच्छुरामधूकशाल्मलीश्रीवेष्टकभृष्टमृत्पयस्योत्पलतिलकणा इति दशेमानि पुरीषविरजनीयानि भवन्ति । (C.S.Su 4/15)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharma-co-therapeutic action
Jambu twak	*Syzygium cumini Skeels.* Myrtaceae	**Rasa:** Kashaya-Madhura-Amla **Guna:** Guru-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Grahi, Mutra sangrahaneeya
Shallaki twak	*Boswellia serrata* Roxb. Burseraceae	**Rasa:** Kashaya-Tikta-Madhura **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Pitta-kaphahara	Grahi, Vranahara
Kacchura/ Kapikacchu	*Mucuna pruriens* (Linn.) DC. Fabaceae	**Rasa:** Tikta **Guna:** Guru **Veerya:** Ushna **Vipaka:** Madhura	Vatahara	Balya, Vrishya, Brimhana
Madhooka	*Madhuka indica J. F.* Gmel. Sapotaceae	**Rasa:** Madhura-Kashaya **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Daha prashamana, Balya, Brimhana

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharma-co-therapeutic action
Shalmaliveshtaka	Resin of *Salmalia malabarica* Schott & Endl. Bombaceae	**Rasa:** Madhura **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Pitta-vatahara	Shonita sthapana, Sandhaneeya, Grahi
Shreeveshtaka	Resin of *Pinus roxburghii* Sargent. Pinaceae	**Rasa:** Katu-Tikta-Madhura **Guna:** Laghu-Snigdha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Kushtagha, Vrana shodhana
Bhrishtamrit	Fried mud	**Rasa:** Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Pittahara	Dahashamaka, Trishnahara Rakta stambhaka, Chardihara
Payasya	*Ipomea digitata* L. Convolvulaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Brimhana, Stanyavardhaka, Shukrala, Jeevani, Rasayana
Utpala	*Nymphea alba* Linn. Nympheaceae	**Rasa:** Madhura-Kashaya-Tikta **Guna:** Picchila-Snigdha-Picchila **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Sangrahika, Daha prashamana
Tila kana	*Sesamum indicum* Linn. Brassicaceae	**Rasa:** Katu-Tikta-Madhura **Guna:** Guru-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Kapha-pittahara	Twachya, Balya, Keshya, Dantya, Grahi

33. मूत्रसङ्ग्रहणीय

अतिमात्रं पुनः पुनश्च प्रवर्तमानं मूत्रं संगृह्णाति मूत्र संग्रहणीयम् । (Yogindranath Sen commentary on ca.s.su 4/8)

The drugs which bring about Mutra sangrahana (checks the excessive passage of urine)

General properties of Mutra sangrahaneeya Gana:

Drugs having Ushna Veerya absorb moisture and control the amount of urine excreted. Kashaya Rasa, Ruksha Guna and Sheeta Dravyas absorb moisture due to their Ruksha Gunna. Sometimes thereis excessive urination due to formation of excess Kleda generated by vitiation of Kapha and Meda and some are excreted through urine. Laghu-Ruksha Guna alleviate Kapha and removes the excess Kleda.

जम्ब्वाम्रप्लक्षवटकपीतनोदुम्बराश्वत्थभल्लातकाश्मन्तकसोमवल्का इति दशेमानि मूत्रसङ्ग्रहणीयानि भवन्ति । (C.S.Su 4/15)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharma-co-therapeutic action
Jambu	*Syzygium cumini* Skeels Myrtaceae	**Rasa:** Kashaya-Madhura-Amla **Guna:** Guru-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Grahi, Mutra sangrahaneeya
Amra	*Mangifera indica* Linn. Anacardaceae	**Rasa:** Madhura-Kashaya-Amla **Guna:** Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Mutra sangrahaneeya, Hridya, Grahi, Vrishya
Plaksha	*Ficus lacor* Buch. – Ham. Moraceae	**Rasa:** Kashaya **Guna:** Ruksha-Guru **Veerya:** Sheeta **Vipaka:** Katu	Pitta-kaphahara	Mutra sangrahaneeya
Vata	*Ficus bengalensis* Linn. Moraceae	**Rasa:** Kashaya **Guna:** Guru-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Mutra sangrahaneeya
Kapeeatana	*Albizzia lebbeck* Benth. Fabaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Anushna **Vipaka:** Katu	Tridosha-hara	Vishaghna, Vedana sthapana
Udumbara	*Ficus racemosa* Linn. Moraceae	**Rasa:** Madhura-Kashaya **Guna:** Ruksha-Guru **Veerya:** Sheeta **Vipaka:** Katu	Pitta-kaphahara	Mutra sangrahaneeya, Vrana shodhana, Vrana ropana
Ashwattha	*Ficus religiosa* Linn. Moraceae	**Rasa:** Kashaya **Guna:** Guru-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Pitta-kaphahara	Mutra sangrahaneeya, Yoni vishodhana, Varnya
Bhallataka	*Semecarpus anacardium* Linn. f. Anacardaceae	**Rasa:** Kashaya-Katu-Tikta **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Kapha-vatahara	Bhedana, Deepana, Vrishya, Kushtaghna
Ashmantaka	*Bauhinia racemosa* Lam. Fabaceae	**Rasa:** Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Pitta-kaphahara	Grahi, Vamaka
Somavalka/ Khadira	*Acacia catechu* Willd. Fabaceae	**Rasa:** Tikta-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Kushtaghna, Pachana

34. मूत्रविरजनीय

रावं मूत्र विरजनीयोऽपि व्याख्येयम् । मूत्रं विरजयति दोषसम्बन्धनिरासं कृत्वा प्रकृतौ स्थापयतीति मूत्रविरजनीयम् । (Chakrapani Commentary on C.S.Su 4/8)

Virajana means colouring. Drugs which restore the colour of the urine are termed as Mutravirajaneeya Dravya.

General properties of Mutravirajaneeya Gana:

Madhura-Kashaya-Tikta Rasa, Picchila-Snigdha Guna, Sheeta Veerya and Mad-

hura Vipaka Dravyas helps to bring the Dushita pitta to normalcy and imparts normal colour to the urine.

पद्मोत्पलनलिनकुमुदसौगन्धिकपुण्डरीकशतपत्रमधुकप्रियङ्गुधातकीपुष्पाणीति दशेमानि मूत्रविरजनीयानि भवन्ति । (C.S.Su 4/15)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Padma	*Nelumbo nucifera* Gaertn. Nelumbonaceae	**Rasa:** Madhura **Guna:** Picchila-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Grahi, Varnya, Daha prashamana
Utpala	*Nymphea alba* Linn. Nympheaceae	**Rasa:** Madhura-Kashaya-Tikta **Guna:** Picchila-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Sangrahika, Daha prashamana
Nalina	A variety of *Nelumbo nucifera* Gaertn. Nelumbonaceae	**Rasa:** Madhura **Guna:** Picchila-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Grahi, Varnya, Daha prashamana
Kumuda	*Nymphea alba* Linn. Nympheaceae	**Rasa:** Madhura-Kashaya-Tikta **Guna:** Picchila-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Sangrahika, Daha prashamana
Sougandhika	A variety of *Nymphea alba* Linn. Nympheaceae	**Rasa:** Madhura-Kashaya- Tikta **Guna:** Picchila-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Sangrahika, Daha prashamana
Pundareeka	A red variety of *Nelumbo nucifera* Gaertn. Nelumbonaceae	**Rasa:** Madhura **Guna:** Picchila-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Grahi, Varnya, Daha prashamana

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Shatapatra	A variety of *Nelumbo nucifera* Gaertn. Nelumbonaceae	**Rasa:** Madhura **Guna:** Picchila-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Grahi, Varnya, Daha prashamana
Madhuka/ Yashtimadhu	*Glyccyrrhiza glabra* Linn. Fabaceae	**Rasa:** Madhura **Guna:** Guru, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Medhya rasayana, Chakshushya, Shukrala, Keshya, Swarya
Priyangu	*Callicarpa macrophylla* Vahl. Verbenaceae	**Rasa:** Tikta-Madhura-Kashaya **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Katu	Vata-pittahara	Vishahara, Grahi, Mutra virajaneeya
Dhataki pushpa	*Woodfordia fruticosa* Kurz. Lythraceae	**Rasa:** Katu-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Madakari, Garbhasthapani, Atisarahara

35. मूत्रविरेचनीय

मूत्रस्य विरेचनं करोतीति मूत्रविरेचनीयः । (Chakrapani Commentary on C.S.Su 4/8)

General properties of Muta virechaneeya Gana:

Drugs with predominant of Jala Mahabhuta increase the Kledata (moisture) in the body. Substances with Madhura Rasa, Sheeta Veerya, Madhura Vipaka increases Kleda in the body. Even due to vitiated Kapha Dosha, there is abnormal increase of Kledata in the body. Sometimes there will be scanty micturition because of some obstruction in the channels (Renal/Ureteric calculi). These are to be treated by drugs like Pashanabheda, Varuna etc. which are having Laghu-Ruksha Guna, Katu Rasa, Ushna Veerya and Katu Vipaka. Most of the below mentioned drugs possess Madhura Rasa, Sheeta Veerya and Madhura Vipaka; which increases Kapha/Kleda in the body, by which the quantity of urine output becomes more.

वृक्षादनीश्वदंष्ट्रावसुकवशिरपाषाणभेददर्भकुशकाशगुन्द्रेत्कटमूलानीति दशेमानि मूत्रविरेचनीयानि भवन्ति। (C.S.Su 4/15)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Vrikshadni/ Bandaka	*Dendrophthoe falcata* (L.f.) Ettingsh Loranthaceae	**Rasa:** Kashaya-Tikta-Madhura **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Tridoshahara	Vishaghna, Vranapaha
Shwadamshtra/ Gokshura	*Tribulus terrestris* Linn. Zygophyllaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vatahara	Deepana, Vrishya, Vasti-shodhana
Vasuka	*Trianthema portulacastrum* L. Aizoaceae	**Rasa:** Katu-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Grahi, Vayasthapana, Shotha nashana
Vashira	*Achyranthes bidentata* Blume. Amaranthaceae	**Rasa:** Tikta-Katu **Guna:** Teekshna **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-vatahara	Deepana, Pachana, Shirovirechanopaga, Krimighna
Pashanabheda	*Bergenia ligulata* Engl. Saxifragaceae	**Rasa:** Kashaya-Tikta **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Katu	Tridoshahara	Mutra virechaneeya, Vasti shodhana
Darbha	*Desmostachya bipinnata* Staff. Poaceae	**Rasa:** Madhura-Kashaya **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara	Stanya janana, Mutra virechaneeya

Kusha	*Desmostachya bipinnata* Staff. Poaceae	**Rasa:** Madhura-Kashaya **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara	Stanya janana, Mutra virechaneeya
Kasha	*Saccharum spontaneum* Linn. Poaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Kapha-pittahara	Vrishya, Mutrala
Gundra	*Typha angustata* Bory & Chaub. Typhaceae	**Rasa:** Kashaya-Madhura **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Madhura	Pittahara	Stanya shodhana, Shukra shodhana, Vrishya, Chakshushya
Itkata	*Typha elephentina* Roxb. Typhaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Mutra virechaneeya, Stanya janana

36. कासहर

कासं हरतीति कासहरम् । (Chakrapani Commentary on Ca.S.Su 4/8)

Drugs which are used to treat cough are called Kasahara Dravya.

General properties of Kasahara Gana:

Ushna Veerya, Laghu-Ruksha-Teekshna properties acts as Kaphahara, Kledahara and Srotoshodhana. Kantakari does Anulomana (Sara Guna), hence beneficial in liquifying the Kapha. Madhura Rasa, Snigdha-Guru Guna of Draksha help in Vataja Kasa.

द्राक्षाभयामलकपिप्पलीदुरालभाशृङ्गीकण्टकारिकावृश्चीरपुनर्नवातामलक्य इति दशेमानि कासहराणि भवन्ति । (C.S.Su 4/16)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Draksha	*Vitis vinifera* Linn. Vitaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha-Mridu **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Brimhana, Swarya, Vrishya, Mutrala
Abhaya/ Haritaki	*Terminalia chebula* Linn. Combretaceae	**Rasa:** Lavana varjita pancha rasa **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Deepana, Rasayana, Anulomana, Chakshushya
Amalaki	*Emblica officinalis* Gaertn. Euphorbiaceae	**Rasa:** Pancha rasa except Lavana **Guna:** Guru-Ruksha **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara	Vrishya, Rasayana, Chakshushya, Vayasthapana, Kushtaghna
Pippali	*Piper longum* Linn. Piperaceae	**Rasa:** Katu **Guna:** Snigdha-Laghu-Teekshna **Veerya:** Ushna (Dry), Sheeta (Fresh) **Vipaka:** Madhura	Vata-kaphahara	Deepana, Shoola prashamana, Vrishya, Rasayana
Duralabha/ Dhanvayasa	*Fagonia cretica* Linn. Piperaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Jwarahara
Shringi/ Karkatashringi	*Pistacia integerrima* Linn. Anacardaceae	**Rasa:** Kashaya-Tikta **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Deepana, Grahi

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Kantakarika	*Solanum xanthocarpum* Schrad. & Wendl. Solanaceae	**Rasa:** Tikta-Katu **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Sara, Deepana, Pachana
Vrishcheera	Trainthema portulacastrum (White variety) Aizoaceae	**Rasa:** Katu-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Grahi, Vayasthapana, Shotha nashana
Punarnava	*Boerhavia diffusa* Linn. (Red variety) Nyctaginaceae	**Rasa:** Katu-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Grahi, Vayasthapana, Shotha nashana
Tamalaki/ Bhumyamalaki	*Phyllanthus amarus* Linn. Phyllanthaceae	**Rasa:** Tikta-Kashaya-Madhura **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Kasahara, Shwasahara

37. श्वासहर

श्वासं श्वासरोगं हरतीति श्वासहरम् । (Chakrapani Commentary on Ca.S.Su 4/8)

The drugs which are helpful to reduce the breathlessness (Asthma) is Shwasahara Dravya.

General properties of Shwasahara Gana:

Shwasa being a Kapha-Vataja disease. Most of the drugs of this Gana is having Tikta-Katu Rasa, Laghu-Ruksha-Teekshna, Ushna Veerya and Katu Vipaka. These properties help in removing the obstructed Kapha in Pranavaha Srotas. They do the Anulomana (brings back the vitiated Doshas to its normal path) and Srotoshodhana (clears the channels of the body). Dominant Katu Rasa, Ushna Veerya and Laghu-Teekshna Guna helps for the Samprapti Vighatna (breaks the pathology).

शटीपुष्करमूलाम्लवेतसैलाहिङ्ग्वगरुसुरसातामलकीजीवन्तीचण्डा इति दशेमानि श्वासहराणि भवन्ति ।

(C.S.Su 4/16)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Shati	*Hedychium spicatum* Ham. Ex Smith. Zingiberaceae	**Rasa:** Kashaya-Tikta-Katu **Guna:** Laghu-Teekshna **Veerya:** Anushna/ Ushna **Vipaka:** Katu	Kapha-vatahara	Shwasahara, Grahi
Push-kara-mula	*Inula racemosa* Hook. f. Asteraceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Hikka-Shwasa-hara, Parsh-washulahara
Amla-vetasa	*Garcinia pedunculata* Roxb. Ex Buch. - Ham. Clusiaceae	**Rasa:** Amla **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Amla	Kapha-vatahara	Deepana, Bhedana, Hridya
Ela	*Elettaria cardamomum* Maton. Zingiberaceae	**Rasa:** Katu **Guna:** Ruksha-Laghu **Veerya:** Sheeta **Vipaka:** Katu	Vata-kaphahara	Deepana, Shwasahara
Hingu	*Ferula narthex* Boiss. Apiaceae	**Rasa:** Katu **Guna:** Teekshna-Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Deepana, Artava janana, Anulomana, Bhedana
Agaru	*Acquilaria agallocha* Roxb. Thymelaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Sheetapanaya-na, Kushtaghna

Surasa/ Tulasi	*Ocimum sanctum* Linn. Lamiaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Deepana, Hridya, Dahakrit
Tama-laki/ Bhu-mya-malaki	*Phyllanthus amarus* Linn. Phyllanthaceae	**Rasa:** Tikta-Kashaya-Madhura **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Kasahara, Shwasahara
Jeevanti	*Leptadenia reticulata* W. & A. Asclepiadaceae	**Rasa:** Madhura **Guna:** Laghu, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Tridosha-hara	Grahi, Chak-shushya, Balya, Brimhana
Chanda /Chor-aka	*Angelica glauca* Edgew. Apiaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Hridya, Samjnasthapaka

38. श्वयथुहर

शोथं हरतीति शोथहरम् । (Chakrapani Commentary on Ca.S.Su 4/8)

The drugs which are helpful to reduce the Shotha/Shvayathu (inflammation) are known as Shothahara Dravya. These below mentioned 10 drugs are considered as Dashamula as the part used in the therapeutics are Mula (root), which include Brihat Panchamula and Laghu Panchamula.

General properties of Shwayathuhara Gana:

Shotha is an inflammation caused by the involvement of all the Tridoshas along with Rakta. The aggravated Pitta, Kapha and Rakta enters the Srotas and afflicts the Vata Dosha. As a result, the Shotha is developed. Any type of inflammation is characterized by pain and swelling. Drugs mentioned in this Gana are having Katu-Tikta-Kashaya Rasa, Laghu-Ruksha Guna, Ushna Veerya, Katu Vipaka and Tridoshahara properties. Because of these properties, the

inflammatory changes which are caused due to either Sama or Kevala Vataja can be well managed by these combinations.

पाटलाग्निमन्थश्योनाकबिल्वकाश्मर्यकण्टकारिकाबृहतीशालपर्णीपृश्निपर्णीगोक्षुरका इति दशेमानि श्वयथुहराणि भवन्ति । (C.S.Su 4/16)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Patala	*Stereospermum suaveolens* DC. Bignoniaceae	**Rasa:** Kashya-Tikta **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Tridosha-hara	Shothahara, Triptighna
Agni-mantha	*Premna mucronata* Roxb. Verbenaceae	**Rasa:** Kashaya-Tikta-Katu **Guna:** Ruksha-Laghu **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Shothahara
Shyo-naka	*Oroxylum indicum* Vent. Bignoniaceae	**Rasa:** Kashaya-Tikta-Madhura **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Vata-kaphahara	Grahi, Deepana
Bilva	*Aegle marmelos* Corr. Rutaceae	**Rasa:** Kashaya-Tikta **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Shothahara, Arshoghna, Pachana, Deepana Pakva phala – Vishtambhi, Vidahi
Kash-marya	*Gmelina arborea* Linn. Verbenaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Guru **Veerya:** Ushna **Fruit:** Sheeta **Vipaka:** Katu	Vata-pittahara	Shothahara, Daha prashamana, Deepana Fruit – Brimhana, Vrishya
Kanta-karika	*Solanum xanthocarpum* Schrad. & Wendl. Solanaceae	**Rasa:** Tikta-Katu **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Sara, Deepana, Pachana
Brihati	*Solanum indicum* Linn. Solanaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Pachana, Shothahara, Grahi
Shala-parni	*Desmodium gangeticum* DC. Fabaceae	**Rasa:** Madhura-Tikta **Guna:** Guru-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Tridosha-hara	Balya, Vrishya, Brimhana, Rasayana
Prishni-parni	*Uraria picta* Devs. Fabaceae	**Rasa:** Madhura-Tikta **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Tridosha-hara	Vrishya, Sangrahika, Deepana
Gok-shuraka	*Tribulus terrestris* Linn. Zygophyllaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vatahara	Deepana, Vrishya, Vasti-shodhana

39. ज्वरहर

ज्वरं ज्वरसन्तापं हरतीति ज्वरहरम् । (Chakrapani Commentary on Ca.S.Su 4/8)

Dravyas which are helpful to cure fever is Jwarahara Dravya.

General properties of Jwarahara Gana:

Jwara is caused by dysfunction of Agni causing Ama. The vitiated Doshas enters the stomach and affects the Agni. Mandagni is the cause for the formation of Apakwa (untransformed) Rasa Dhatu leading to the formation of Ama, which blocks the body channels and fever is developed. Ama Pachana and Agni Deepana are the line of treatment to be followed while treating the fever. Most of the drugs of this Gana possess Madhura/Madhura-Tikta-Kashaya/Tikta Rasa, Laghu-Ruksha Guna, Ushna Veerya and Madhura Vipaka. Tikta Rasa Dravyas help for the digestion of untransformed Rasa Dhatu leading to Jwarahara action. The drugs of Jwarahara Mahakashaya are having Pittahara

action mainly, so better indicated in Jeerna Jwarahara as the most of the drugs are having Madhura Rasa, Madhura Vipaka and Sheeta Veerya.

सारिवाशर्करापाठामञ्जिष्ठाद्राक्षापीलुपरुषकाभयामलकविभीतकानीति दशेमानि ज्वरहराणि भवन्ति ।

(C.S.Su 4/16)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Sariva	*Hemidesmus indicus* R. B Apocynaceae	**Rasa:** Madhura-Tikta **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Tridosha-hara	Amavishahara, Jwarahara, Daha prashamana, Stanya shodhana, Varnya, Kantya
Shar-kara	Sugar candy	**Rasa:** Madhura **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Chakshushya, Chardi nashana, Dahahara
Patha	*Cissampelos pareira* Linn. Menispermaceae	**Rasa:** Katu **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Jwarahara, Stanya shodhana
Man-jishta	*Rubia cordifolia* Linn. Rubiaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Guru-Ruksha **Veerya:** Ushna **Vipaka:** Katu **Prabhava:**	Vata-pittahara	Varnya, Vishaghna, Jwarahara
Drak-sha	*Vitis vinifera* Linn. Vitaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha-Mridu **Veerya:** Sheeta **Vipaka:** Madhura **Prabhava:** Virechaka	Kapha-pittahara	Brimhana, Swarya, Vrishya, Mutrala
Peelu	*Salvadora persica* Linn. Salvadoraceae	**Rasa:** Madhura-Tikta **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Virechana

Paru-shaka	*Grewia asiatica* Linn. Malvaceae	**Rasa:** Madhura **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Pitta-vatahara	Hridhya, Brimhana
Abha-ya/ Hari-taki	*Terminalia chebula* Linn. Combretaceae	**Rasa:** Lavana varjita pancha rasa **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Madhura	Tridosha-hara	Deepana, Rasayana, Anulomana, Chakshushya
Ama-laki	*Emblica officinalis* Gaertn. Euphorbiaceae	**Rasa:** Pancha rasa except Lavana **Guna:** Guru-Ruksha **Veerya:** Sheeta **Vipaka:** Madhura	Tridosha-hara	Vrishya, Rasayana, Chakshushya, Vayasthapana, Kushtaghna
Vibhi-taki	*Terminalia bellerica* Roxb. Combretaceae	**Rasa:** Kashaya **Guna:** Ruksha-Laghu **Veerya:** Ushna **Vipaka:** Madhura	Kapha-pittahara	Chakshushya, Bhedana, Keshya

40. श्रमहर

श्रमं हरतीति श्रमहरम् । (Chakrapani Commentary on Ca.S.Su 4/8)

The Dravyas which help to overcome the fatigue is Shramahara.

General properties of Shramahara Gana:

Fatigue (Shrama) is caused due excessive physical exertion, which causes the aggravation of Vata Dosha in the body. The Dravyas which possess Madhura Rasa, Guru-Snigdha Guna, Madhura Vipaka nourishes the Mamsa Dhatu and replenish Dhatu Kshaya. They act as Vata Shamana and Shramahara by their Guru-Snigdha-Picchila Guna. Most of the drugs of Shramahara Gana exhibit Balya, Brumhana, Vrishya action, which is beneficial to rectify the fatigue.

द्राक्षाखर्जूरप्रियालबदरदाडिमफल्गुपरुषकेक्षुयवषष्टिका इति दशेमानि श्रमहराणि भवन्ति ।

(C.S.Su 4/16)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Draksha	*Vitis vinifera* Linn. Vitaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha-Mridu **Veerya:** Sheeta **Vipaka:** Madhura **Prabhava:** Virechaka	Kapha-pittahara	Brimhana, Swarya, Vrishya, Mutrala
Kharjura	*Phoenix sylvestris* Roxb. Aracaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-kapha-hara	Shramahara, Balya, Tarpana, Vrishya
Priyala	*Buchanania lanzan* Spreng. Anacardaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha-Sara **Veerya:** Sheeta **Vipaka:** Madhura	Pitta-kapha-hara	Shramahara, Vrishya
Badara	*Ziziphus jujuba* Lam. Rhamnaceae	**Rasa:** Madhura-Amla **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vatahara	Bhedana, Hridya, Grahi, Brimhana
Matulunga	*Citrus medica* Linn. Rutaceae	**Rasa:** Madhura-Amla **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Amla	Vata-kapha-hara	Deepana, Hridya, Grahi
Phalgu/ Kakodumbara	*Ficus hispida* Linn. f. Moraceae	**Rasa:** Kashaya-Tikta **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Stambhana, Kushtaghna
Parushaka	*Grewia asiatica* Linn. Malvaceae	**Rasa:** Madhura **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Pitta-vatahara	Hridhya, Brimhana

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Ikshu	*Saccharum officinarum* Linn. Poaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Balya, Vrishya, Mutrala
Yava	*Hordeum vulgare* Linn. Poaceae	**Rasa:** Kashaya-Madhura **Guna:** Guru-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Pitta-kapha-hara	Lekhana, Agni vardhana, Vrishya, Balya, Pramehaghna
Shashtika	A variety of *Oryza sativa* Linn. Poceae	**Rasa:** Madhura **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Tridosha-hara	Pathya, Ruchya, Deepana, Balada

41. दाहप्रशमन

दाहं प्रशमयतीति दाहप्रशमनम् । (Chakrapani Commentary on Ca.S.Su 4/8)

That which eliminates burning sensation of the body is called Daha Prashamana.

General properties of Dahaprashamana Gana:

Daha is due to the aggravated Pitta. The drugs of this Gana possess Madhura/Tikta-Madhura/Madhura-Kashaya-Tikta/Tikta Rasa, Sheeta Veerya and Madhura/Katu Vipaka. This signifies the predominance of Prithvi and Ap Mahabhuta. Though Guduchi is having Ushna Veerya, it brings down the burning sensation because of its Tikta Rasa (Gangadhara commentary). They act as Pittashamaka, hence beneficial in bringing down the burning sensation.

लाजाचन्दनकाश्मर्यफलमधूकशर्करानीलोत्पलोशीरसारिवागुडूचीह्रीबेराणीति दशेमानि दाहप्रशमनानि भवन्ति । (C.S.Su 4/17)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Laja	Parched rice	**Rasa:** Madhura **Guna:** Laghu, Alpa ruksha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Tarpana, Deepana, Balya Chardi-Atisara-Daha-Shrama-Meha-Meda-Trishapaha

Chan-dana	*Santalum album* Linn. Santalaceae	**Rasa:** Tikta-Madhura **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Varnya, Vishahara, Dahaprashamana
Kash-marya phala/ Gam-bhari	*Gmelina arborea* Linn. Verbenaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Guru **Veerya:** Ushna Fruit - Sheeta **Vipaka:** Katu	Vata-pittahara	Shothahara, Daha prashamana, Deepana Fruit – Brimhana, Vrishya
Mad-hooka	*Madhuka indica* J. F. Gmel. Sapotaceae	**Rasa:** Madhura-Kashaya **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Daha prashamana, Balya, Brimhana
Shar-kara	Sugar candy	**Rasa:** Madhura **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Chakshushya, Chardi nashana, Dahahara
Neelo-tpala	*Nymphea stellata* Willd. Nympheaceae	**Rasa:** Madhura-Kashaya-Tikta **Guna:** Picchila-Snigdha-Picchila **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Sangrahika, Daha prashamana
Usheera	*Vetiveria ziznoides* Nash. Poaceae	**Rasa:** Tikta **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Daha prashamana, Shukra shodhana, Stanya janana, Varnya
Sariva	*Hemidesmus indicus* R. B Apocynaceae	**Rasa:** Madhura-Tikta **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Tridosha-hara	Amavishahara, Jwarahara, Daha prashamana, Stanya shodhana, Varnya, Kantya

Gudu-chi	*Tinospora cordifolia* Miers. Menispermaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Laghu-Guru-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Tridosha-hara	Deepana, Rasayana, Jwaraghna
Hree-vera	*Pavonia odorata* Willd. Malvaceae	**Rasa:** Tikta **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Pitta-kapha-hara	Deepana, Pachana

42. शीतप्रशमन

शीतं प्रशमयतीति शीतप्रशमनम् । (Chakrapani Commentary on Ca.S.Su 4/8)

That which removes a sensation of chill is Sheetaprashamana.

General properties of Sheetaprashamana Gana:

Sheeta is caused due to aggravation of Vata and Kapha. The Dravyas having Katu-Tikta-Kashaya Rasa, Laghu-Ruksha Guna, Ushna Veerya is used to pacify the aggravated Vata and Kapha and eliminate the Shaityata.

तगरागुरुधान्यकशृङ्गवेरभूतीकवचाकण्टकार्यग्निमन्थश्योनाकपिप्पल्य इति दशेमानि शीतप्रशमनानि भवन्ति । (C.S.Su 4/17)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Tagara	*Valeriana wallichi* DC. Valerianaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Snigdha-Laghu **Veerya:** Ushna **Vipaka:** Katu	Tridosha-hara	Vishahara, Bhuta-Mada-Apasmara nashana
Agaru	*Acqularia agallocha* Roxb. Thymelaeceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kapha-hara	Sheetapanayana, Kushtaghna
Dhanya-ka	*Coriandrum sativum* Linn. Apiaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Tridosha-hara Pittahara (Ardra)	Trishnahara, Rochana, Deepana

Shringavera	*Zingiber officinale* Rosc. Zingiberaceae	**Rasa:** Katu **Guna:** Guru-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Madhura	Vata-kapha-hara	Deepana, Bhedana, Shoola prshamana
Bhuteeka/ Yavanika	*Trachyspermum ammi* Sprague. Apiaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kapha-hara	Pachana, Deepana, Ruchya
Vacha	*Acorus calamus* Linn. Araceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Medhya, Pachana, Deepana, Kantya, Vibandhahara, Shakrit-mutra vishodhini
Kantakarika	*Solanum xanthocarpum* Schrad & Wandl. Solanaceae	**Rasa:** Tikta-Katu **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Sara, Deepana, Pachana
Agnimantha	*Premna mucronata* Roxb. Verbenaceae	**Rasa:** Kashaya-Tikta-Katu **Guna:** Ruksha-Laghu **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Shothahara
Shyonaka	*Oroxylum indicum* Vent. Bignoniaceae	**Rasa:** Kashaya-Tikta-Madhura **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Vata-kapha-hara	Grahi, Deepana

Pippali	*Piper longum* Linn. Piperaceae	**Rasa:** Katu **Guna:** Snigdha-Laghu-Teekshna **Veerya:** Ushna (Dry), Sheeta (Fresh) **Vipaka:** Madhura	Vata-kapha-hara	Deepana, Shoola prashamana, Vrishya, Rasayana

43. उदर्दप्रशमन

उदर्दो वरटीदंष्ट्राकार: शोथ: तत्प्रशमनं उदर्दप्रशमन: I (Chakrapani Commentary on C.S.Su 4/8)

Drugs that which cures the Udarda - an inflammatory lesion like Varati damsha (wasp sting) are called as Udarda Prashamana Dravyas.

General properties of Udardaprashamana Gana:

Udarda is a Kapha predominant Tridoshaja vyadhi. Udarda prashamana Dravyas have Tikta-Kashaya Rasa, Sheeta Veerya and Katu Vipaka; they pacify the vitiated Kapha. Thus, they eliminate associated Jwara, Chardi, Kandu etc symptoms also.

तिन्दुकप्रियालबदरखदिरकदरसप्तपर्णाश्वकर्णार्जुनासनारिमेदा इति दशेमानि उदर्दप्रशमनानि भवन्ति I

(C.S.Su 4/17)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Tinduka	*Diospyros peregrina* Gurke. Ebenaceae	**Rasa:** Madhura **Guna:** Laghu (Ama phala), Guru (Pakva phala) **Veerya:** Sheeta **Vipaka:** Katu	Vatala - Ama phala Pitta-kaphahara - Pakva phala	Trishnahara, Ruchya
Priyala	*Buchanania lanzan* Spreng. Anacardaceae	**Rasa:** Madhura **Guna:** Guru-Snigdha-Sara **Veerya:** Sheeta **Vipaka:** Madhura	Pitta-kaphahara	Shramahara, Vrishya

Badara	*Ziziphus jujuba* Lam. Rhamnaceae	**Rasa:** Madhura-Amla **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vatahara	Bhedana, Hridya, Grahi, Brimhana
Khadira	*Acacia catechu* Willd. Fabaceae	**Rasa:** Tikta-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Kushtaghna, Pachana
Kadara/ Vit Khadira	*Acacia suma* Roxb. Fabaceae	**Rasa:** Tikta-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Kushtaghna, Vranapaha
Saptaparna	*Alstonia scholaris* R. Br. Apocynaceae	**Rasa:** Madhura **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-vatahara	Deepana, Kushtaghna, Jwarahara
Ashwakarna	*Dipterocarpus turbinstus* Gaertn. Dipterocarpaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Kushtaghna, Kandughna
Arjuna	*Terminalia arjuna* R. Br. Combretaceae	**Rasa:** Kashaya **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Hridya, Rasayana
Asana	*Pterocarpus marsupium* f. acuta Prain Fabaceae	**Rasa:** Kashaya-Tikta **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Kushtaghna, Pramehaghna
Arimeda	*Acacia farnesiana* (Linn.) Willd. Fabaceae	**Rasa:** Kashaya **Guna:** Ruksha-Laghu **Veerya:** Ushna **Vipaka:** Katu	Kaphahara	Mukha-danta rogahara, Kandughna, Kushtaghna

44. अङ्गमर्दप्रशमन

अङ्गमर्दं प्रशमयतीति अङ्गमर्दप्रशमनम् । (Chakrapani Commentary on Ca.S.Su 4/8)

That which subsides the pain of the body is known as Angamarda prashamana Dravyas.

General properties of Angamardaprashamana Gana:

The cause for the body ache is either Sama Vata or Nirama Vata. Drugs possessing Katu/Tikta/Tikta-Katu, Ushna Veerya, Laghu-Ruksha Guna helps to expel or digest the Ama (Pachana) and thereby the Agni get corrected and the pain get relieved. Madhura Rasa, Guru-Snigdha Guna helps to relieve the pain in Nirama stage.

विदारीगन्धापृश्निपर्णीबृहतीकण्टकारिकैरण्डकाकोलीचन्दनोशीरैलामधुकानीति दशेमानि अङ्गमर्दप्रशमनानि भवन्ति । (C.S.Su 4/17)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Vidarigandha/ Shalaparni	*Desmodium gangeticum* DC. Fabaceae	**Rasa:** Madhura-Tikta **Guna:** Guru-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Balya, Vrishya, Brimhana, Rasayana
Prishniparni	*Uraria picta* Devs. Fabaceae	**Rasa:** Madhura-Tikta **Guna:** Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Vrishya, Sangrahika, Deepana
Brihati	*Solanum indicum* Linn. Solanaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Pachana, Shothahara, Grahi
Kantakarika	*Solanum xanthocarpum* Schrad. & Wendl. Solanaceae	**Rasa:** Tikta-Katu **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Sara, Deepana, Pachana

Eranda	*Ricinus communis* Linn. Euphorbiaceae	**Rasa:** Madhura-Katu-Kashaya **Guna:** Snigdha-Teekshna-Ruksha **Veerya:** Ushna **Vipaka:** Madhura	Vata-kaphahara	Vrishya (root) Deepana, Vaya sthapana, Rechana (seed)
Kakoli	*Roscoea purpurea* Smith Zingiberaceae	**Rasa:** Madhura **Guna:** Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Shukrala, Brimhana, Stanyakara, Jeevana, Vrishya
Chandana	*Santalum album* Linn. Santalaceae	**Rasa:** Tikta-Madhura **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Varnya, Vishahara, Dahaprashamana
Usheera	*Vetiveria ziznoides* Nash. Poaceae	**Rasa:** Tikta **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Daha prasha mana, Shukra shodhana, Stanya janana, Varnya
Ela	*Elettaria cardamomum* Maton. Zingiberaceae	**Rasa:** Katu **Guna:** Ruksha-Laghu **Veerya:** Sheeta **Vipaka:** Katu	Vata-kaphahara	Deepana, Shwasahara
Madhuka/ Yashtimadhu	*Glyccyrrhiza glabra* Linn. Fabaceae	**Rasa:** Madhura **Guna:** Guru, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Medhya rasayana, Chakshushya, Shukrala, Keshya, Swarya

15. शूलप्रशमन

शूलं प्रशमयतीति शूलप्रशमनम् । (Chakrapani Commentary on Ca.S.Su 4/8)

The Dravyas which cure the pain abdomen are termed as Shula Prashamana Dravyas. Shula refers to 'Udara shula' in Ayurveda.

General properties of Shulaprashamana Gana:

Most of the drugs in this group are having Katu Rasa, Laghu-Ruksha Guna, Ushna Veerya and Katu Vipaka. They exhibit Agni Deepana properties. These will help to digest the Ama, and in turn helps for the Vatanulomana so as to combat the abdominal pain.

पिप्पलीपिप्पलीमूलचव्यचित्रकशृङ्गवेरमरिचाजमोदाजगन्धाजाजीगण्डीराणीति दशेमानि शूलप्रशमनानि भवन्ति । (C.S.Su 4/17)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Pippali	*Piper longum* Linn. Piperaceae	**Rasa:** Katu **Guna:** Snigdha-Laghu-Teekshna **Veerya:** Ushna (Dry), Sheeta (Fresh) **Vipaka:** Madhura	Vata-kaphahara	Deepana, Shoola prashamana, Vrishya, Rasayana
Pippali mula	Roots of *Piper longum* Linn. Piperaceae	**Rasa:** Katu **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Madhura	Kapha-vatahara	Deepana, Pachana, Shoola prashamana
Chavya	*Piper chaba* Hunter Piperaceae	**Rasa:** Katu **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Deepana, Pachana
Chitraka	*Plumbago zeylanica* Linn. Plumbaginaceae	**Rasa:** Katu **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Deepana, Pachana, Arshoghna, Lekhana, Bhedana, Shula prashamana
Shringavera	*Zingiber officinale* Rosc. Zingiberaceae	**Rasa:** Katu **Guna:** Guru-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Madhura	Vata-kaphahara	Deepana, Bhedana, Shoola prshamana

Maricha	*Piper nigrum* Linn. Piperaceae	**Rasa:** Katu **Guna:** Laghu-Ruksha-Teekshna, Guru (Ardra) **Veerya:** Ushna **Vipaka:** Katu; Madhura (Ardra)	Kapha-vatahara Pittakara (Shushka)	Deepana, Shoola prashamana, Krimighna, Shirovirechana,
Ajamoda	*Apium graveolens* Linn. Apiaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Deepana, Shula prashamana
Ajagandha	*Gynandropsis pentaphylla* L. Cleomaceae	**Rasa:** Madhura **Guna:** Guru-Ruksha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-vatahara	Deepana, Pachana, Krimighna
Ajaji/ Jeeraka	*Cuminum cymium* Linn. Apiaceae	**Rasa:** Katu **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Katu	Kaphahara	Deepana, Grahi, Pachana, Ruchya
Gandeera	Stem of *Ferula narthex*	**Rasa:** Katu **Guna:** Teekshna-Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Vata-kaphahara	Deepana, Artava janana, Anulomana, Bhedana

46. शोणितस्थापन

शोणितस्थापनं शोणितातिप्रवृत्तिस्तम्भनम् । तच्चतुर्विधम् - सन्धानं स्कन्दनं चैव पाचनं दहनं तथा ।

(Dalhana Commentary on S.S.Ci 1/48)

शोणितस्य दुष्टस्य दुष्टिमपहृत्य प्रकृतौ स्थापयतीति शोणितस्थापनम् ।

(Chakrapani Commentary on C.S.Su 4/8)

The Dravyas which are helpful to arrest the bleeding (Rakta Srava) are called Shonitasthapana or the Dravyas which removes the Doshas (impurities) from the vitiated Rakta and brings back to normalcy are called as Shonitasthapana. Dalhana interpret it as the action which is related to coagulation.

रुधिरसंस्थापनं पुरुषस्य रुधिरवृद्धिस्थैर्यकरम् । (Indu Commentary on A.S.Su 15/)

Indu, the commentator of Astanga Hridaya stated that, Shonitasthapana is that which increases the quantity of Rakta and gives stability.

General properties of Shonitasthapana Gana:

Rakta and Pitta Dosha are Ashraya-Ashrayi in relation, both are same in nature, so Rakta is vitiated by Pitta Dosha. Thus, the Dravyas included in Shonitathapana gana are having Pittashamaka properties. So, these Dravyas can be used in different Rakta vikaras. These drugs possess Rakta skandana property (styptic), which arrests the bleeding. Most of the drugs of this group are having Madhura /Tikta-Kashaya Rasa, Laghu-Snigdha guna, Sheeta Veerya and Madhura Vipaka, which helps to stop the bleeding, clears the vitiated Doshas and increases the quantity of Rakta as well.

तं नातिशीतैर्लघुभिः स्निग्धैः शोणितवर्धनैः । ईषदम्लैरनम्लैर्वा भोजनैः समुपाचरेत् ॥ (S.S.Su 14/38)

As per Sushruta Samhita, Laghu-Snigdha and Amla Dravyas stimulate the blood formation.

मधुमधुकरुधिरमोचरसमृत्कपाललोध्रगैरिकप्रियङ्गुशर्करालाजा इति दशेमानि शोणितस्थापनानि भवन्ति।
(C.S.Su 4/18)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Madhu	Honey	**Rasa:** Madhura-Kashaya **Guna:** Laghu-Ruksha-Vishada **Veerya:** Ushna **Vipaka:** Madhura	Kapha-pittahara	Varnya, Vrana shodhana, Vrana ropana, Lekhana, Chakshushya
Madhuka/ Yashtimadhu	*Glyccyrrhiza glabra* Linn. Fabaceae	**Rasa:** Madhura **Guna:** Guru, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Medhya rasayana, Chakshushya, Shukrala, Keshya, Swarya
Rudhira/ Kumkuma	*Crocus sativa* Linn. Iridaceae	**Rasa:** Katu-Tikta **Guna:** Snigdha **Veerya:** Ushna **Vipaka:** Katu	Tridoshahara	Varnya

Mocha-rasa	*Salmalia malabarica* Schott & Endl. Bombaceae	**Rasa:** Kashaya **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Pitta-vatahara	Grahi, Vrishya,
Mrit-kapala	Pieces of earthen pot	**Rasa:** Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Pittahara	Dahashamaka, Trishnahara Rakta stambhaka, Chardihara
Lodhra	*Symplocos racemosa* Roxb. Symplocaceae	**Rasa:** Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Grahi, Shonita sthapana, Purisha sangrahaneeya
Gairika	Ferrum haematite (Red ochre)	**Rasa:** Kashaya-Madhura **Guna:** Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Chakshushya, Stambhana, Rakta shodhaka
Priya-ngu	*Callicarpa macrophylla* Vahl. Verbenaceae	**Rasa:** Tikta-Madhura-Kashaya **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Katu	Vata-pittahara	Vishahara, Grahi, Mutra virajaneeya
Shar-kara	Sugar candy	**Rasa:** Madhura **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Chakshushya, Chardi nashana, Dahahara
Laja	Parched rice	**Rasa:** Madhura **Guna:** Laghu, Alpa ruksha **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Tarpana, Deepana, Balya Chardi-Atisara-Daha-Shrama-Meha-Meda-Trishapaha

47. वेदनास्थापना

वेदनायां संभूतायां तां निहन्त्य शरीरं प्रकृतौ स्थापयतीति वेदनास्थापनम् । (Chakrapani on C.S.Su 4/8)

वेदनायां यत्र निवृत्तौ व्यापत्तौ तत्र वेदनां स्थापयतीति । (Gangadhara Commentary on C.S.Su 4/8)

The drugs which are used to relieve the pain and restores the body to normalcy are known as Vedanasthapana.

General properties of Vedanasthapana Gana:

शालकट्फलकदम्बपद्मकतुम्बमोचरसशिरीषवञ्जलैलवालुकाशोका इति दशेमानि वेदनास्थापनानि भवन्ति । (C.S.Su 4/18)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Shala	*Shorea robusta* Gaertn. Dipterocarpaceae	**Rasa:** Kashaya-Madhura **Guna:** Rooksha **Veerya:** Sheeta **Vipaka:** Katu	Vata-pittahara	Vrana shodhana, Vrana ropana, Stambhana
Kat-phala	*Myrica esculenta* Buch. - Ham. Myricaceae	**Rasa:** Kashaya-Tikta-Katu **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kapha-hara	Vedana sthapana, Shukra shodhana, Sandhaneeya
Kada-mba	*Anthocephalus cadamba* (Roxb) Miq Rubiaceae	**Rasa:** Tikta-Kashaya **Guna:** Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Tridosha-hara	Vrana ropana, Vedana sthapana, Shukra shodhana
Pad-maka	*Prunus cerasoides* D.Don. Rosaceae	**Rasa:** Kashaya-Tikta **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Vedanasthapana, Garbha sthapana
Tumba	*Xanthoxylum alatum* Roxb. Rutaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Shulahara, Krimighna, Deepana, Ruchya

Mocha-rasa	*Salmalia malabarica* Schott & Endl. Bombaceae	**Rasa:** Kashaya **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Pitta-vatahara	Grahi, Vrishya,
Shiree-sha	*Albizzia lebbeck* Benth. Fabaceae	**Rasa:** Madhura-Tikta-Kashaya **Guna:** Laghu-Ruksha-Teekshna **Veerya:** Anushna **Vipaka:** Katu	Tridosha-hara	Vishaghna, Vedana sthapana
Van-jula/ Vetasa	*Salix caprea* L. Salicaceae	**Rasa:** Tikta-Kashaya **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Katu	Kapha-vatahara	Deepana, Ruchya, Bhuta vinashana
Elava-luka	*Prunus cerasoides* D.Don. Rosaceae	**Rasa:** Kashaya-Tikta **Guna:** Laghu-Snigdha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Vedanasthapana, Garbha sthapana
Ashoka	*Saraca asoca* Linn. Fabaceae	**Rasa:** Tikta-Kashaya **Guna:** Ruksha-Laghu **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Grahi, Varnya

Pain is caused by either due to Saamata or due to Dhatu kshaya. Few of above drugs are having Tikta-Kashaya/Tikta-Katu Rasa, Ushna Veerya, Lagh-Ruksha Guna, Katu Vipaka. Hence, helpful to combat the Saamata and there by relieves the pain.

48. संज्ञास्थापना

संज्ञा ज्ञानञ्च स्थापयतीति संज्ञास्थापनम् । (Chakrapani commentary on C.S.Su 4/8)

These are the drugs which help to restore back the lost consciousness (Sangnya) from the unconscious state.

General properties of Sangnyasthapana Gana:

Sangnya nasha/ Unconciuosness happens because of the covering of Manas and Buddhi by the Tamas. Sangnyasthapana Dravyas are indicated in conditions like Mada, Murcha etc. to restore back the lost consciousness. Most of the drugs are having Katu-Tikta/Tikta/Katu-Tikta-Kashaya Rasa, Ushna Veerya,

Teekshna Guna; which helps to restore the Sangnya by removing the Avarana of Tamas. These drugs being Ushna and Teekshna, stimulates the brain and cardiac functions and improves the circulation and there by the consciousness is regained.

अञ्जनान्यवपीडाश्च धूमाः प्रधमनानि च । सूचीभिस्तोदनं शस्तं दाहः पीडा नखान्तरे ॥
लुञ्चनं केशलोम्नां च दन्तैर्दशनमेव च । आत्मगुप्तावघर्षश्च हितं तस्यावबोधने ॥
सम्मूर्च्छितानि तीक्ष्णानि मद्यानि विविधानि च । प्रभूतकटुयुक्तानि तस्यास्ये गालयेन्मुहुः ॥
मातुलुङ्गरसं तद्वन्महौषधसमायुतम् । तद्वत्सौवर्चलं दद्याद्युक्तं मद्याम्ललाञ्जिकैः ।
हिङ्गुषणसमायुक्तं यावत् संज्ञाप्रबोधनम् ॥ (C.S.Su 24/46-50)

To make someone to recover from Sangnyanasha, the collyrium, Avapeeda nasya, Dhumapana, Pradhamana nasya, puncturing with needle, Agni karma, causing pain to the nail bed, plucking the hair of the head - body, biting with teeth, rubbing with the Kapikacchu etc are advised. Make the patient to drink strong alcoholic beverages, lot of pungent substances should be poured into the mouth of the patient. Juice of Matulunga (*Citrus medica*) fruit with dry ginger, Suvarchala lavana, alcoholic beverages, Amla Kanji, Hingu, Trikatu etc.

हिङ्गुकैटर्यारिमेदावचाचोरकवयस्थागोलोमीजटिलपलङ्कषाशोकरोहिण्य इति दशेमानि संज्ञास्थापनानि भवन्ति । (C.S.Su 4/18)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Hingu	*Ferula narthex* Boiss. Apiaceae	**Rasa:** Katu **Guna:** Teekshna-Laghu-Snigdha **Veerya:** Ushna **Vipaka:** Katu	Vata-kapha-hara	Deepana, Artava janana, Anulomana, Bhedana
Kaitarya/ Katphala	*Myrica esculenta* Buch. - Ham. Myricaceae	**Rasa:** Kashaya-Tikta-Katu **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Vata-kapha-hara	Vedana sthapana, Shukra shodhana, Sandhaneeya
Arimeda	*Acacia farnesiana* (Linn.) Willd. Fabaceae	**Rasa:** Kashaya **Guna:** Ruksha-Laghu **Veerya:** Ushna **Vipaka:** Katu	Kapha-hara	Mukha-danta rogahara, Kandughna, Kushtaghna

Vacha	*Acorus calamus* Linn. Araceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Medhya, Pachana, Deepana, Kantya, Vibandhahara, Shakritmutra vishodhini
Choraka	*Angelica glauca* Edgw. Apiaceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Hridya, Samjnasthapana
Vayastha/ Brahmi	*Bacopa monnieri* Pennel. Scrophulariaceae	**Rasa:** Tikta-Kashaya **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Medhya, Rasayana, Swarya
Golomi /Vacha	*Acorus calamus* Linn. Araceae	**Rasa:** Katu-Tikta **Guna:** Laghu-Teekshna **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Medhya, Pachana, Deepana, Kantya, Vibandhahara, Shakritmutra vishodhini
Jatila/ Jatamamsi	*Nardostachys jatamansi* (D.Don) DC. Valerianceae	**Rasa:** Tikta-Kashaya-Madhura **Guna:** Ruksha-Laghu **Veerya:** Sheeta **Vipaka:** Katu	Tridoshahara	Medhya, Balya
Palankasha/ Guggulu	*Commiphora mukul* Engl. Burseraceae	**Rasa:** Tikta **Guna:** Laghu-Ruksha-Vishada-Picchila **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Brimhana, Vrishya, Balya (Nava guggulu) Lekhana (Purana guggulu)
Ashoka rohini/ Katurohini	*Picrorhiza kurroa* Royle ex Benth. Scrophulariaceae	**Rasa:** Tikta **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Bhedana

49. प्रजास्थापना

प्रजोपघातकं दोषं हत्वा प्रजां स्थापयतीति प्रजास्थापनम् । (Chakrapani Commentary on C.S.Su 4/8)

The drugs which remove all the vitiated Doshas in body that causes obstacles in the process of the conception and helps to sustain the pregnancy.

General properties of Prajasthapana Gana:

Amalaki, Shatavari, Bala etc drugs give strength to Garbhashaya and nourish Garbha by their Madhura Vipaka, Sheeta Veerya and Snigdha Gunas. The Garbhashaya Dushti is caused by excess Mamsa, Meda and Kapha by accumulating Kleda. Katu-Tikta-Kashaya Rasa, Laghu-Ruksha Guna and Katu Vipaka Dravyas of the Gana helps to eliminate the Kleda; thereby correcting the Mamsa-Kapha Dushti. These Drugs cleanses the Garbhashaya, hence prevents the miscarriages. For the better progency, Brahmi, Lakshmana, Amalaki, Shatavari etc can be consumed by the mother before and after conception.

ऐन्द्रीब्राह्मीशतवीर्यासहस्रवीर्याऽमोघाऽव्यथाशिवारिष्टावाट्यपुष्पीविष्वक्सेनक्रान्ता इति दशेमानि प्रजास्थापनानि भवन्ति । (C.S.Su 4/18)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Aindri/ Indravaruni	*Citrullus colocynthis* Schrad. Cucurbitaceae	**Rasa:** Tikta **Guna:** Laghu **Veerya:** Ushna **Vipaka:** Katu	Kapha-pittahara	Rechana, Vishaghna
Brahmi	*Bacopa monnieri* Pennel. Scrophulariaceae	**Rasa:** Tikta-Kashaya **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Medhya, Rasayana, Swarya
Shataveerya/ Durva	*Cynodon dactylon* Pers. Poaceae	**Rasa:** Tikta-Madhura-Kashaya **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Varnya, Prajasthapana, Rakta stambhana

Sahas-ravee-rya/ Durva bheda	A variety of *Cynodon dactylon* Pers. Poaceae	**Rasa:** Tikta-Madhura-Kashaya **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Varnya, Praja sthapana, Rakta stambhana
Amo-gha/ Laksh-mana	*Ipomoea sepiaria* Koenig ex Roxb. Covolvulaceae	**Rasa:** Madhura **Guna:** Guru-Ruksha-Sara **Veerya:** Sheeta **Vipaka:** Madhura	Tridosha-hara	Stri vandyatva nashini, Balya, Garbhada, Vrishya
Avyatha / Guduchi	*Tinospora cordifolia* Miers. Menispermaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Laghu-Guru-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Tridosha-hara	Deepana, Rasayana, Jwaraghna
Shiva/ Haritaki	*Terminalia chebula* Linn. Combretaceae	**Rasa:** Madhura-Amla-Kashaya-Katu-Tikta **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Madhura	Tridosha-hara	Deepana, Rasayana, Anulomana, Chakshushya
Arish-ta/ Katu-rohini	*Picrorhiza kurro* Royle ex Benth. Scrophulariaceae	**Rasa:** Tikta **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Bhedana
Vatya-pushpi/ Bala	*Sida cordifolia* Linn. Malvaceae	**Rasa:** Madhura **Guna:** Laghu-Snigdha-Picchila **Veerya:** Sheeta **Vipaka:** Madhura	Vatahara	Balya, Brimhana, Vrishya, Prajasthapana
Vish-vaksena kranta/ Priya-ngu	*Callicarpa macrophylla* Vahl. Verbenaceae	**Rasa:** Tikta-Madhura-Kashaya **Guna:** Guru **Veerya:** Sheeta **Vipaka:** Katu	Vata-pittahara	Vishahara, Grahi, Mutra virajaneeya

50. वय:स्थापना (Anti-aging)

वय: तरुणं स्थापयतीति वय: स्थापनम् । (Chakrapani Commentary on C.S.Su 4/8)

जरामभिहत्य यौवनं तारुण्यं रक्षति वयस्तरुणं स्थापयतीति वय:स्थापनम् । (Gangadhara Commentary on C.S.Su 4/8)

आमलकं वय:स्थापनानाम् । (C.S.Su 25/40)

The drugs which prevent ageing process is known as Vayasthapana. These Dravyas preserves youth. Dalhana has explained the word "Vayasthpana" by giving its two meanings of "Vayasthapana": (1) it enables the person to live a full life span of 100 years. (2) It makes the man to live young for a long period thus prevents the Jara. Acharya Charaka considered 'Amalaki' as the best Vayasthapana Dravya.

General properties of Vayasthapana Gana:

In old age, there is wasting of all the Dhatus which result in Vata Prakopa. These drugs are having action on Dhatu, as they possess Madhura Vipaka, Sheeta Veerya. These drugs will nourish and rejuvenate all the Dhatus and thereby prevent aging process. Hence, they help to prevent Dhatu kshaya and thereby prevents age related changes in the body. As few drugs possess Ushna Veerya, Katu-Kashaya/Tikta Rasa, they have impact on Dhatwagni. These drugs can be used to prevent geriatric health issues too.

अमृताऽभयाधात्रीमुक्ताश्वेताजीवन्त्यतिरसामण्डूकपर्णीस्थिरापुनर्नवा इति दशेमानि वय:स्थापनानि भवन्ति। (C.S.Su 4/18)

Drug	Botanical name & Family	Rasa Panchaka	Doshaghna Karma	Pharmaco-therapeutic action
Amrita/ Guduchi	*Tinospora cordifolia* Miers. Menisperaceae	**Rasa:** Tikta-Katu-Kashaya **Guna:** Laghu-Guru-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Tridosha-hara	Deepana, Rasayana, Jwaraghna

Abhya/ Haritaki	*Terminalia chebula* Linn. Combretaceae	**Rasa:** Madhura-Amla-Kashaya-Katu-Tikta **Guna:** Laghu-Ruksha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Deepana, Rasayana, Anulomana, Chakshushya
Dhatri/ Amalaki	*Emblica officinalis* Gaertn. Euphorbiaceae	**Rasa:** Pancha rasa except Lavana **Guna:** Guru-Ruksha **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara	Vrishya, Rasayana, Chakshushya, Vayasthapana, Kushtaghna
Mukta/ Rasna	Pluchea lanceolata (DC.) C.B Clarke Asteraceae	**Rasa:** Tikta **Guna:** Guru **Veerya:** Ushna **Vipaka:** Katu	Kapha-vatahara	Ama pachana, Shothaghna, Vishaghna
Shweta/ Aparajita	White variety of *Clitoria ternatea* Linn. Fabaceae	**Rasa:** Katu-Tikta-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Tridoshahara	Medhya, Vishahara
Jeevanti	*Leptadenia reticulata* W. & A. Asclepiadaceae	**Rasa:** Madhura **Guna:** Laghu, Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Tridoshahara	Grahi, Chakshushya, Balya, Brimhana
Atirasa/ Shatavari	*Asparagus racemosus* Willd. Asparagaceace	**Rasa:** Tikta-Madhura **Guna:** Guru-Snigdha **Veerya:** Sheeta **Vipaka:** Madhura	Vata-pittahara	Rasayana, Shukrala, Stanyakari, Balya
Mandukaparni	*Centella asiatica* Urban. Apiaceae	**Rasa:** Tikta **Guna:** Laghu **Veerya:** Sheeta **Vipaka:** Madhura	Kapha-pittahara	Medhya rasayana, Swarya, Smritiprada

Sthira/ Shalaparni	*Desmodium gangeticum* DC. Fabaceae	**Rasa:** Madhura-Tikta **Guna:** Guru-Snigdha **Veerya:** Ushna **Vipaka:** Madhura	Tridoshahara	Balya, Vrishya, Brimhana, Rasayana
Punarnava	*Boerhavia diffusa* Linn. Nyctaginaceae	**Rasa:** Katu-Kashaya **Guna:** Laghu-Ruksha **Veerya:** Sheeta **Vipaka:** Katu	Kapha-pittahara	Deepana, Grahi, Vayasthapana, Shotha nashana

10.2 GLOSSARY

Many of the drugs are repeated in more than one Gana.

S.N.	Name of the Drug	Name of the Gana
1.	Abhya/Hareetaki/Shiva	Arshoghna, Kushtaghna, Virechanopaga, Hikkanigrahana, Kasahara, Jwarahara, Prajasthapana, Vaya sthapana
2.	Aksheeva/Shigru/Shobhanjanaka	Krimighna, Swedopaga, Shirovirechanopaga
3.	Akhuparnika	Krimighna
4.	Agaru	Shwasahara, Sheetaprashamana
5.	Agnimantha	Anuvasanopaga, Shothahara, Sheetaprashamana
6.	Agnimukhi/Langali	Bhedaneeya
7.	Aindri/Brahmi/Vayastha	Balya, Sangnyasthapana Prajasthapana
8.	Ajaji/Jeeraka	Shulaprashamana
9.	Ajagandha	Shulaprashamana
10.	Ajamoda	Deepaneeya, Shulaprashamana
11.	Amalaki/Dhatri	Kushtaghna, Virechanopaga, Kasahara, Jwarahara, Vayasthapana, Prajasthapana
12.	Ambashtaki/Patha	Sandhaneeya, Stanyashodhana, Jwarahara
13.	Amlavetasa	Deepaneeya, Hridya, Shwasahara
14.	Amogha/Lakshmana	Prajasthapana

15.	Amra/Amra Pallava/Amrasthi	Hridya, Chardinigrahana, Pureeshasangrahaneeya, Mutrasangrahaneeya
16.	Amrataka	Hridya,
17.	Anantha/Sariva	Varnya, Kanthya, Stanyashodhana, Pureesha sangrahaneeya, Jwarahara, Dahaprashamana
18.	Apamarga/ Pratyakpushpi/ Kinihi	Krimighna, Vamanopaga, Shirovirechanopaga,
19.	Aparajita	Vayasthapana
20.	Aragwadha/Kritamala	Kushtaghna, Kandughna
21.	Arimeda	Udardaprashamana, Sangnyasthapana
22.	Arjuna	Udardaprashamana
23.	Arka/Sadapushpi/ Vasuka	Bhedaneeya, Shukrashodhana, Swedopaga, Vamanopaga
24.	Arushkara/Bhallatakasthi	Kushtaghna, Deepaneeya, Mutrasangrahaneeya
25.	Asana	Udardaprashamana
26.	Ashmantaka	Mutrasangrahaneeya
27.	Ashoka	Vedanasthapana
28.	Ashokarohini/Katukarohini/ Arishta/Rohini/ Shakuladani	Lekhaneeya, Bhedaneeya, Balya, Stanyashodhana, Sangnyasthapana, Prajasthapana
29.	Ashwakarna	Udardaprashamana
30.	Ashwagandha	Brimhaneeya, Balya
31.	Ashwattha	Mutrasangrahaneeya
32.	Atibala	Balya
33.	Atirasa/Shatavari/ Vriddharuha	Balya, Shukrajanana, Vayasthapana

34.	Ativisha	Lekhaneeya, Arshoghna
35.	Avyatha/Guduchi/ Amrita/ Madhuparni	Sandhaneeya, Triptighna, Stanyashodhana, Snehopaga, Trishnanigrahana, Dahaprashamana, Prajasthapana, Vayasthapana
36.	Badara/Badara beeja	Hridya, Swedopaga, Virechanopaga, Chardinigrahana, Hikkanigrahana, Shramahara, Udarda prashamana
37.	Bala/Vatyayani/ Vatyapushpi	Balya, Brimhaneeya, Prajasthapana
38.	Bhadroudini	Brimhaneeya
39.	Bharadwaji	Brimhaneeya
40.	Bharangi/Padma	Pureeshasangrahaneeya
41.	Bilva	Arshoghna, Asthapanopaga, Anuvasanopaga, Shwayathuhara
42.	Bimbi	Vamanopaga
43.	Brihati	Kantya, Hikkanigrahana, Shwayathuhara, Angamardaprashamana
44.	Bhrishta mrit	Pureeshavirajaneeya
45.	Bhutika/Yavani	Sheetaprashamana
46.	Chandana	Varnya, Vishaghna, Kandughna, Trishnanigrahana, Dahaprashamana, Angamardaprashamana
47.	Chanda	Shwasahara
48.	Chavya	Deepaneeya, Triptighna, Arshoghna, Shulaprashamana
49.	Chitra/Danti	Bhedaneeya
50.	Chitraka	Bhedaneeya, Lekhaneeya, Deepaneeya, Shulaprashamana Triptighna, Arshoghna
51.	Chirabilva	Bhedaneeya, Lekhaneeya
52.	Choraka	Sangnyasthapana
53.	Dadima	Hridya, Chardinigrahana

54.	Darbha	Stanyajanana, Mutravirechaneeya
55.	Daruharidra	Lekhaneeya, Arshoghna, Kandughna
56.	Devadaru/Suradaru	Stanyashodhana, Anuvasanopaga
57.	Dhataki	Sandhaneeya, Pureeshasangrahaneeya, Mutavirajaneeya
58.	Dhanvayasa/Duralabha	Arshoghna, Trishnanigrahana, Hikkanigrahana, Kasahara
59.	Dhanyaka	Trishnanigrahana, Sheetaprashamana
60.	Draksha/Mridweeka	Kanthya, Snehopaga, Virechanopaga, Kasahara, Jwarahara, Shramahara,
61.	Ela/ Sukshmaila	Vishaghna, Shwasahara, Angamardaprashamana
62.	Elavaluka	Shukrashodhana, Vedanasthapana
63.	Eranda	Bhedaneeya, Swedopaga, Angamardaprashamana
64.	Gambhari/ Kashmarya	Virechanopaga, Shwayathuhara, Dahaprashamana
65.	Gandeera	Krimighna, Shulaprashamana
66.	Gairika	Shonitasthapana
67.	Gokshura/Shwadamshtra	Krimighna, Anuvasanopaga, Mutravirechaneeya, Shwayathuhara
68.	Golomi/Vacha	Sangnyasthapana
69.	Guggulu/Palankasha	Sangnyasthapana
70.	Gundra	Stanyajanana, Mutravirechaneeya
71.	Haimavati/Shweta vacha	Lekhaneeya
72.	Hamsapadi	Kanthya
73.	Haridra	Lekhaneeya, Kushtaghna, Vishagna
74.	Hingu	Deepaneeya, Shwasahara, Sangnyasthapana
75.	Hreevera	Trishnanigrahana, Dahaprashamana
76.	Ikshu/Ikshu mula	Kanthya, Shukrashodhana, Shramahara

77.	Ikshuraka/Kokilaksha	Shukrashodhana
78.	Ikshuvalika	Stanyajanana
79.	Indravaruni/Aindri	Prajasthapana
80.	Itkata	Stanyajanana, Mutravirechaneeya
81.	Jambu	Chardinigrahana, Pureeshavirajaneeya, Mutrasangrahaneeya
82.	Jatamamsi/Nalada	Sangnyasthapana, Kandughna
83.	Jatila/Ucchata bheda	Shukrajanana
84.	Jati pravala	Kushtaghna
85.	Jeevaka	Jeevaneeya, Snehopaga, Shukrajanana
86.	Jeevanti	Jeevaneeya, Snehopaga, Shwasahara, Vayasthapana
87.	Jyotishmati	Shirovirechanopga
88.	Kacchura /Kapikacchu/Rishabhi	Pureeshavirajaneeya, Balya
89.	Kadamba/Neepa	Vamanopaga, Vedanasthapana
90.	Kadara/Vit Khadira	Udardaprashamana
91.	Kakoli	Jeevaneeya, Brimhaneeya, Snehopaga, Shukrajanana, Angamardaprashamana
92.	Kantakarika	Kanthya, Hikkanigrahana, Kasahara, Shwayathuhara, Sheetaprashamana, Angamardaprashamana
93.	Kandekshu	Shukrashodhana
94.	Karamarda	Hridya
95.	Karanja/Naktamala	Kandughna
96.	Karaveera	Kushtaghna
97.	Karbudara	Vamanopaga
98.	Karkandu	Virechanopaga
99.	Karkatashringi/Kuleera shringi/Shrngi	Hikkanigrahana, Kasahara

100.	Kasha	Stanyajanana, Mutravirechaneeya
101.	Kataka	Vishaghna
102.	Katruna mula	Stanyajanana
103.	Katphala/ Kaitarya	Sandhaneeya, Kanthya, Shukrashodhana, Vedana-sthapana, Sangnysthapana
104.	Katvanga/Shyonaka	Pureeshasangrahaneeya
105.	Kebuka	Krimighna
106.	Khadira /Somavalka	Kushtaghna, Mutrasangrahaneeya Udardaprasha-mana
107.	Kharjura	Shramahara
108.	Kiratatikta	Stanya shodhana, Trishnanigrahana
109.	Kovidara	Vamanopaga
110.	Kshavaka	Shirovirechanopaga
111.	Ksheera Kakoli	Jeevaneeya, Brimhaneeya, Snehopaga, Shukra-janana
112.	Ksheerini	Brimhaneeya
113.	Kumuda	Mutravirajaneeya
114.	Kusha	Stanya janana, Mutravirechaneeya
115.	Kulattha	Swedopaga
116.	Kumkuma/Rudhira	Shonitasthapana
117.	Kuvala	Hridya, Virechanopaga
118.	Kulinga/Ucchata bheda	Shukrajanana
119.	Kushta	Lekhaneeya, Shukrashodhana, Asthapanopaga
120.	Kutaja	Arshoghna, Kandughna
121.	Lakucha	Hridya
122.	Laja	Chardinigrahana, Dahaprashamana, Shonita-sthapana
123.	Lata/Shyama Durva	Varnya

124.	Lodhra	Sandhaneeya, Pureeshasanrahaneeya, Shonita-sthapana
125.	Madanaphala	Asthapanopaga, Anuvasanopaga,
126.	Madhu	Vamanopaga, Shonitasthapana
127.	Madhuka/ Yashtimadhu	Brimhaneeya, Sandhaneeya, Varnya, Kanthya, Kandughna, Snehopaga, Vamanopaga, Astha-panopaga, Chardinigrahana, Pureeshavirajaneeya, Mutravirajaneeya, Angamardaprashamana, Shonitasthapana
128.	Madhooka	Dahaprashamana
129.	Maha Shweta	Shirovirechanopaga
130.	Mahoushadha/ Nagara/ Shringavera	Deepaneeya, Triptighna, Arshoghna, Stanya shodhana, Trishna nigrahana, Sheeta prashamana, Shula prashamana
131.	Mandukaparni	Vayasthapana
132.	Masha	Swedopaga
133.	Mashaparni/ Rishyaprokta	Jeevaneeya, Balya, Shukrajanana
134.	Manjishta/Samanga	Sandhaneeya, Varnya, Vishaghna, Jwarahara
135.	Maricha	Deepaneeya, Krimighna, Shirovirechanopaga, Shula prashamana
136.	Matulunga	Hridya, Chardinigrahana, Shramahara
137.	Meda	Jeevaneeya, Snehopaga, Shukrajanana
138.	Mahemeda	Jeevaneeya
139.	Mocharasa	Sandhaneeya, Pureeshasangrahaneeya, Shonita-sthapana, Vedanasthapana
140.	Mrit/Mritkapala	Chardinigrahana, Shonitasthapana
141.	Mudgaparni	Jeevaneeya, Shukrajanana
142.	Murva	Triptighna, Stanyashodhana
143.	Musta	Lekhaneeya, Triptighna, Stanyashodhana, Kan-dughna, Trishnanigrahana

144.	Nalina	Mutravirajaneeya
145.	Neelotpala	Dahaprashamana
146.	Nimba	Krimighna
147.	Nirgundi/ Sindhuvara	Krimighna, Vishaghna
148.	Padma	Mutravirajaneeya
149.	Padmaka	Varnya, Vedanasthapana
150.	Padma kesara	Pureeshasangrahaneeya
151.	Palindi/Krishna sariva	Vishaghna
152.	Parpataka	Trishnanigrahana
153.	Parushaka	Virechanopaga, Jwarahara
154.	Pashanabheda	Mutravirechaneeya
155.	Patala	Shwayathuhara
156.	Payasya/Ksheera vidari	Brimhaneeya, Balya, Varnya, Pureeshavirajaneeya
157.	Patola	Triptighna, Trishnanigrahana
158.	Peelu	Virechanopaga, Jwarahara
159.	Phalgu	Shramahara
160.	Pippali	Kanthya, Triptighna, Asthapanopaga, Shiro- virechana, Hikkanigrahana, Kasahara, Sheeta prashamana, Shulaprashamana
161.	Pippali mula	Shulaprashamana
162.	Plaksha	Mutrasangrahaneeya
163.	Prishniparni	Sandhaneeya, Shwayathuhara, Angamardaprashamana
164.	Priyangu/Vishwaksenakranta	Sandhaneeya, Pureeshasangrahaneeya, Mutravirajaneeya, Shonitasthapana, Prajasthapana
165.	Priyala	Shramahara, Udardaprashamana

166.	Punarnava	Swedopaga, Anuvasanopaga, Kasahara, Vayasthapana
167.	Pundareeka	Mutravirajaneeya
168.	Pushkaramula	Hikkanigrahana, Shwasahara
169.	Rajakshavaka	Brimhaneeya
170.	Rasna/Mukta/ Suvaha	Vishagha, Anuvasanopaga, Prajasthapana
171.	Rishabhaka	Jeevaneeya, Shukrajanana
172.	Rishyagandha	Brimhaneeya
173.	Sadapushpi	Swedopaga
174.	Sahasraveerya/ Durva bheda	Prajasthapana
175.	Samanga/Lajjalu	Pureeshasangrahaneeya
176.	Samudraphena	Shukrashodhana
177.	Saptaparna	Kushtaghna, Udardaprashamana
178.	Sariva	Same as Anantha
179.	Sarshapa	Kandughna, Asthapanopaga, Shirovirechanopaga
180.	Shala	Vedanasthapana
181.	Shallaki twak	Pureeshavirajaneeya
182.	Shali	Stanyajanana
183.	Shalmali	Pureeshavirajaneeya
184.	Shanpushpi	Swedopaga
185.	Shankhini	Bhedaneeya
186.	Sharkara	Jwarahara, Dahaprashamana, Shonitasthapana
187.	Shashtika Shali	Stanyajanana, Shramahara
188.	Shatapatra	Mutravirajaneeya
189.	Shatapushpa	Asthapanopaga, Anuvasanopaga
190.	Shataveerya/Durva bheda	Prajasthapana

191.	Shati	Hikkanigrahana, Shwasahara
192.	Shireesha/Kapeetana	Vishaghna, Mutrasangrahaneeya, Vedanasthapana
193.	Shleshmataka	Vishaghna
194.	Shreeveshtaka	Pureeshavirajaneeya
195.	Shweta/Aparajita	Shirovirechanopaga, Vayasthappana
196.	Shyonaka	Anuvasanopaga, Shwayathuhara, Sheetaprashamana
197.	Sita/Shweta Durva	Varnya
198.	Sougandhika	Mutra virajaneeya
199.	Suvaha/Trivrit	Bhedaneeya, Asthapanopaga
200.	Swarnaksheeri	Bhedaneeya
201.	Sthira/Shalaparni/ Vidarigandha	Balya, Snehopaga, Shwayathuhara, Angamardaprashamana, Vayasthapana
202.	Surasa/Tulasi	Shwasahara
203.	Tamalaki/ Bhumyamalaki	Kasahara, Shwasahara
204.	Tila/Tila kana	Vamanopaga, Pureeshavirajaneeya
205.	Tinduka	Udardaprashamana
206.	Tumba	Vedanasthapana
207.	Tunga/Punnaga	Varnya
208.	Udumbara	Mutrasangrahaneeya
209.	Usheera/Veerana	Varnya, Shukrashodhana, Stanya janana, Chardinigrahana, Dahaprashamana, Angamardaprashamana
210.	Utpala	Pureeshavirajaneeya, Mutravirajneeya
211.	Vacha	Lekhaneeya, Triptighna, Arshoghna, Asthapanopaga, Sheetaprashamana, Sangnyasthapana
212.	Vanjula	Vedanasthapana
213.	Vashira	Mutravirechaneeya

214.	Vata	Mutrasangrahaneeya
215.	Vatsakaphala	Stanyashodhana, Asthapanopaga
216.	Vibhitaki	Virechanopaga, Jwarahara
217.	Vidanga	Triptighna, Kushtaghna, Krimighna, Shirovirechanopaga
218.	Vidari	Kanthya, Snehopaga
219.	Vidula	Vamanopaga
220.	Vrikshamla	Hridya
221.	Vriksharuha/ Vrikshadani	Hikkanigrahana, Mutravirechaneeya
222.	Vrishaparnika	Krimighna
223.	Vrishcheera/Rakta Punarnava/Vasuka	Vamanopaga, Anuvasanopaga, Mutravirechaneeya, Kasahara
224.	Yava	Vamanopaga, Chardinigrahana, Shramahara

10.3 GLOSSARY

Long Essay:

1. Write about the Charakokta Panchashat Mahakashaya in detail.

Short Essay:

1. Write about the Vedanasthapana, Shonitasthapana, Shulaprashamana and Sangnyasthapana Mahakashaya in detail.
2. Write about the Vamanopaga, Virechanopaga, Asthapanopaga and Anuvasanopaga Gana of Charaka in detail.

Short Answers:

1. Kasahara & Shwasahara Dashemani
2. Stanya Janana & Stanya Shodhana Mahakashaya
3. Shukra Janana & Shukra Shodhana Gana of Charaka

Multiple Choice Questions:

1. Shireesha and Sindhuvara is mentioned under which Gana?

   a. Vishagna b. Kushtaghna c. Kandughna d. None

2. Which drug is most repeated (11 times) among the 50 Mahakashaya's of Charaka?
   a. Guduchi b. Madhuka/Yashtimadhu
   c. Both 1 & 2 d. Haridra
3. Charaka's classification of drugs is based on .....
   a. Karma b. Guna c. Rasa panchaka d. Both 1 & 2
4. In which Mahakashaya, the Ashtavargas are mentioned?
   a. Brimhaneeya b. Kanthya
   c. Shula prashamana d. Jeevaneeya
5. Arjuna comes under which Mahakashaya?
   a. Krimighna b. Hridya
   c. Angamarda prashamana d. Shonita sthapana
6. Bharadwaji is the synonym of which drug?
   a. Bala b. Vana karpasa
   c. Manjishta d. Pippali
7. Bhrishta mrittika is mentioned under which Mahakashaya?
   a. Mutra sangrahaneeya b. Pureesha virajaneeya
   c. Mutra virechaneeya d. None of the above
8. Dashamula is mentioned under which Gana of Charaka?
   a. Shvayathuhara b. Kandughna
   c. Angamarda prashamana d. Vedana sthapana
9. Which drug is mentioned under Trishna nigrahana and Vaya sthapana?
   a. Abhaya b. Amrita c. Nagara d. Punarnava
10. Ashoka is mentioned in which Mahakashaya?
   a. Vedana sthapana b. Shonita sthapana
   c. Vaya sthapana d. Shula prashamana

Answer Key

1 a	2 b	3 a	4 d	5 b	6 b	7 b	8 a	9 b	10 a

Bibliography

1. Agnivesha (1998). Charaka Samhita (Vol 1-2). Redacted by Charaka: Hindi commentary by Kashinatha Shastri, Gorakhanatha Chaturvedi: Rajeshwaradatta Shastri, Yadunandana Upadhaya, Ganga Sahaya Pandeya, Banarasidasa Gupta (eds), Varanasi. Chaukhambha Bharati Academy.
2. Sharma P. V. (2009). Dravyaguna Vignyana Volume 1& 2, Chaukhambha Bharati AcademyVaranasi.
3. Acharya Yadavji Trikamji (1997), Dravyaguna Vijnanam, Purvardha, Vaidyanath Ayuveda Bhavan Ltd. Nagpur.
4. Deshapande A.P, Ranade Subhash (2021), Dravyaguna vijnana Part 1, M.D Nandurkar, Anmol Prakashan, Budhawar Peth, Pune.
5. Hegde Prakash, Harini (2019), A Text Book of Dravyaguna Vijnana Volume 1, Chaukhambha Sanskrit Sansthan, Varanasi.
6. Vidyanath R (2006). A Handbook of Astanga Sangraha Sutra sthana, Chaukhambha Surbharati Prakshan, Varanasi.
7. Kallianpur Supriya, Gokarn Rohit (2019). A text book of Dravyaguna Vijnana (1st ed., Vol 1-2). Varanasi. Chaukhambha Orientalia.